OLD WEST REGION NON-RESIDENT TRAVEL AND RECREATION SURVEY

SUMMARY REPORT

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RECREATION SURVEY

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MONTANA

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DENVER, COLORADO

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1 Introduction

The five states of the Old West Region - Montana, Wyoming, North Dakota, South Dakota, and Nebraksa - are nationally renowned for their scenic, cultural, recreational, and historic resources. Millions of non-resident travellers visit the region and participate in outdoor recreation each year. While in the Region travellers spend millions of dollars and greatly affect the economic base of the Old West Region.

In recent years, several studies on non-resident travellers have been conducted. In these studies travellers, tourists, and outdoor recreationist of varying ages were asked a variety of questions about similar and different topics at different point in time using various methods. In some cases, only estimates of non-residents had been developed. Clearly, this incomplete, inconsistent, incomparable, and out-of-date information was a poor basis for making sound decision by the Old West Regional Commission and the states in the Old West Region.

Recognizing this data problem, the Commission contracted with Oblinger-Smith Corporation in 1977 to review the data needs of all parties involved. From this review of existing data Oblinger-Smith noted that:

> at the present time not even an estimate of the total number of out-of-state travellers to the Region can be made with any reasonable degree of confidence. More complex, and difficult to gather, data on expenditure patterns, recreation activities, and trip party characteristics is even less available at the regional level.
>
> Knowledge of out-of-state travellers and their recreational and other activities within the Old West Region is basic to public and private decision-making with regard to the provision of services for travellers and tourists; effective travel promotion; the assessment of impacts of non-residents on outdoor recreational facilities; and the development of strategies to stimulate regional economic development.[1]

The 1977 study concluded that a complete data update was necessary. Based on meetings in all states of the Old West Region and on review of information already available, a survey of non-resident travellers at the regional

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[1] Study Design for Travel, Tourism, and Non-Resident Recreation Within the Old West Region, Oblinger-Smith Corporation, October, 1977.

scale was recommended in order to obtain updated, comparable data in an economical manner. The recommended survey was to use common definitions, collect data on a specified set of items, assure complete coverage on a seasonal basis, and provide results within an acceptable range of precision and with a reasonable degree of confidence. The study proposed was to be of stratified random deisgn, so that each non-resident traveller would have approximately an equal chance of being selected regardless of mode of travel, time of year, or states visited. Stratification of the survey sample by mode of travel and time of year would assure that the data collected would not be biased towards summer visitors travelling by motor vehicle.

The study design having been completed and found desirable by Old West member states, contractors were solicited to conduct the actual survey. The consulting firm of Oblinger-McCaleb[2], Architects, Engineers, and Planners, Denver, Colorado, was selected to do the study. The objectives of the study were:

1. to obtain adequate data related to non-resident travel and recreation in the Old West Region through a survey of non-residents travellers,

2. to use the survey data to estimate various items related to the characteristics of non-residents, their travel and expenditure patterns, and their recreational participation.

The items for which information were collected by Oblinger-McCaleb relate to the socio-economic and demographic characteristics of non-resident travellers, their travel and expenditure patterns, their recreational participation, and their visitation of attractions and events. Specifically, the study utilized questionnaires and other techniques to collect data on the following items:

Socio-economic/demographic data

- ages of individual members of travel party
- income of travel party

Travel and trip data

- size of travel party
- mode of transportation (auto, bus, air, other)
- trip origin

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[2] Subcontractors included Montana State University, (Department of Agricultural Economies and Economics); T.A.P., Inc., (Aviation Consultants); North Dakota State University (Community and Regional Planning Department); and University of Nebraska (Community Resource and Research Center).

- primary trip destination
- primary trip purpose
- routes taken in the region
- length of stay in the region (borken down by state)

Expenditure patterns data (broken down by state)

- lodging establishments
- eating and drinking places
- gasoline service stations
- amusement and recreation facilities
- other businesses

Recreational participation data (broken down by state)

- backpacking
- horseback riding
- swimming
- picnicking
- camping
- power boating
- non-power boating
- fishing
- hunting
- snowmobiling
- downhill snow skiing
- crosscountry snow skiing
- golf
- tennis
- off-highway vehicle travel

Visitation of attractions and events data (broken down by state)

- attractions and events visited
- primary influence for visiting each

The information collected on these items was used to make estimates of: (1) the total number of non-resident person-visits to each of the five states, broken down by season; (2) the total non-resident travel expenditures in each of the five states, broken down by season and expenditure category; and (3) the total non-resident outdoor recreational participation in each of the five states, broken down by season and recreational activity.

The remainder of this report outlines the survey methodology utilized, implementation of the survey, processing of the data collected, and major findings of the year long study. Chapter 2 (Survey Design and Implementation) discusses the selected survey technique, how the survey was accomplished, and problems encountered in undertaking the survey. Chapter 3 (Survey Instrument) outlines the design, layout, and return of the survey instrument utilized in the survey. Chapter 4 (Data Processing) explains the procedures used in assembling the raw data collected into a usable form, the computer program used in compiling the information, and access

to the magnetic tapes on which the information has been stored. Chapter 5 (Major Findings) summarizes on a seasonal basis the data collected. These data were utilized to estimate total non-resident travellers to the State, non-resident expenditures in the State, and non-resident recreation participation in the State. These estimates are summarized by season in Chapter 5.

2 Survey Methodology and Implementation

Introduction

A central objective of the Non-Resident Travel and Recreation Survey was to select, design, and implement a methodology that insured each non-resident traveller would have approximately an equal change of being selected to respond to a questionnaire or chosen for a personal interview over the course of a year. To accomplish this task, a stratified random design was required in order to survey non-resident travellers regardless of their mode of travel, season of the year, or the purpose of their trip to the State. At the outset of the project several surveying methodologies were identified and evaluated. Past travel and recreation oriented studies have essentially utilized one or a combination of the following survey methods:

1. Interview and distribute questionnaires to out-of-state travallers while they are visiting selected recreation areas.

2. Interview and distribute questionnaires to out-of-state travellers who stop at certain identified locations (e.g. rest areas, restuarants, gas stations, motels, etc).

3. Distribute questionnaires to non-resident travellers as they leave the State.

4. Interview non-resident travellers as they enter the State.

5. Distribute questionnaires to non-resident travellers as they enter the State.

6. Interviewing non-resident travellers as they leave the State.

The least desirable technique was determined to be undertaking interviews and/or distributing questionnaires to out-of-state travellers at selected recreation areas. The selected recreation area survey methodology is only appropriate when the survey objective is to obtain travel characteristics and recreation participation information on a site specific basis (e.g. at the Black Hills, Yellowstone National Park, etc.). However, this approach can create sample biases since it does not record comprehensive geographic state-wide travel information. Furthermore, this technique does not have the ability to obtain information on travellers who visit the State for purposes other than visiting a recreation area. It must be remembered that a major purpose of the Old West Non-Resident Travel and Recreation Survey was to collect data on all travellers, not just recreationists and tourists. For these reasons the recreation area technique

was determined to be unacceptable.

The second technique of interviewing and distributing questionnaires to out-of-state travellers who stop at certain identified locations (e.g., a rest area along an interstate or at a motel in a certain community, etc.) also has a tendency to bias the sample results. When utilizing this methodology the sample design is not random because not all out-of-state travellers have an equal chance of being selected. Regardless of this known deficiency, the Consultant was required to implement this technique on several occasions. In Nebraska, State officials determined that it was imperative that surveying along Interstate 80 was conducted only at rest area locations. Thus, only those visitors who voluntarily stopped at a rest area were surveyed. This decision was a result of high traffic volumes on I-80 and a concern for preventing traffic accidents. Consequently the Consultant was not able to implement the preferred technique of randomly stopping out-of-state vehicles near highway border locations through the utilization of a state highway signage system and flagging techniques.

The Consultant was also required to periodically survey at motels, hotels, restuarants, and gas stations during the winter months since it was impossible to utilize the signage system due to poor weather and road conditions. This actually compounded the degree of surveying difficulty since non-resident winter travel volumes were extremely low to begin with. When this technique had to be implemented, the field crews changed their survey locations on a periodic basis in order to interject a degree of randomness, expecially between different locations and types of business establishments.

The other four surveying techniques that were evaluated were determined to be more suitable since they did not entail the sample bias problems that were associated with surveying at selected recreation areas or other pre-determined locations. However, after considerable research it was decided not to use the methodologies of distributing questionnaires to out-of-state travellers as they left the state or interviewing travellers as they entered the state. Both of these techniques were determined to be inappropriate due to the problems associated with memory recall on the part of the respondent. Relying on a traveller's recall could substantially affect the data collected,especially in non-destination states which contain less memorable attractions. An even more important recall consideration that could affect the survey results pertains to the amount of time a traveller actually spent in the State. A traveller who spent three weeks in the State is less likely to accurately remember what he did, where he went, and how much he spent. The probability of collecting inaccurate or a relatively small data base lead to the rejection of handing out survey instruments to travellers as they left the State. Interviewing travellers as they entered the State also has a deficiency pertaining to the fact that travellers can only guess or estimate answers to the interview questions based on their expected plans. As is usually the case, what travellers actually do is often not what they plan to do. Utilization of this survey technique could have resulted in inaccurate data, therefore, it was also deemed inappropriate.

It was concluded that the most suitable survey methodologies were to distribute a diary-type questionnaire to out-of-state travellers as they entered the State and to conduct interviews with travellers as they left the State. The distribution of questionnaires to travellers when entering the State allowed survey crew members to explain the importance of the study. More importantly, it enabled the survey respondent to record travel and recreation participation information throughout the course of their trip. The problems associated with memory recall were largely alleviated from the study since the surveys were returned by mail after the trip to the State was completed. However, approximately 10 percent of the travel sample respondents were required to answer the survey instrument questions through the course of a personal interview before leaving the State. This interview technique insured a larger survey response rate compared to exclusively relying on the mailback of the questionnaires. This interviewing technique was more time consuming and subsequently more costly, but the increased response rate proved to be a very beneficial result. A further discussion of the actual surveying techniques that were undertaken is presented later in this chapter.

Sample Size

One of the most important initial survey decisions was the determination of the sample size which concerns the appropriate number of questionnaires to be distributed and the number of personal interviews to be undertaken during the course of the survey period. Sample size is important because of its relationship to the confidence of the travel and recreation estimates and because of its survey cost implications. After reviewing the available budget and the scope of the project, it was decided that 9,000 questionnaires were to be distributed and 1,000 personal interviews were to be indertaken in the State throughout the 12 month study.

Stratification of the Survey Sample

As discussed earlier, the purpose of stratifying the random sample was to assure that each non-resident traveller would have approximately an equal chance of being surveyed regardless of mode of travel, season of year, or trip purpose. The first step of the stratification of the sample involved the delineation of strata which concerned the modes of transportation to be surveyed as well as the demarcation of survey time frames. It was determined at the outset of the project that the sample was to be administered to summer, fall, winter, and spring non-resident visitors who travelled by motor vehicle, airplane, bus, and train. The organization of non-resident travellers into the various strata largely assured that sample biases were not introduced. Thus, careful attention was given to stratifying and weighting survey distribution based on non-resident traffic volumes between the various modes, the selected survey locations, and the seasons of the year. This effort was undertaken to alleviate sample biases such as sampling only summer visitors who travelled in the State by means of the automobile on the Intersate Highway System.

The survey sample was stratified by the four seasons of the year since the majority of past non-resident travel and recreation data has been collected and analyzed for only the summer tourist oriented months. The year-

long survey was divided into the following four time frames:

1. Summer - June, 1979 through August, 1979
2. Fall - September, 1979 through November, 1979
3. Winter - December, 1979 through February, 1980
4. Spring - March, 1980 through May, 1980

Thus, the sample methodology allowed the survey results to be tabulated and analyzed separately for each season and for the modes of travel surveyed within each season. This disaggregated survey approach allows the user to analyze travel and recreation trends between the various modes within any season as well as providing a comparison between and among the four seasons. A major goal throughout the course of establishing and implementing the survey methodology was to insure a high degree of flexibility when analyzing and comparing the survey findings.

During the coarse of the study the only major sample strata variation that was allowed pertained to eliminating the train passenger survey mode. After the first six weeks of initiating the survey it became obvious that surveying this mode of travel was an extremely difficult and time consuming task. This was largely a result of train traffic occurring in the early morning hours, travellers remaining on the train, and the low volume of non-resident travellers.

The second stratification step entailed weighting the distribution of the 10,000 surveys based on the corresponding traffic volumes for each mode and for each season. This sample frame procedure was critical since it determined the allocation of the overall sample size to each of the delineated stratum at randomly selected survey locations. The allocation of the sample design was based on 1977 non-resident data since it was the most current and complete data available. Non-resident data for 1977 for the following factors was generated:

1. Total number of non-resident passengers on an annual basis for each of the three modes, motor vehicle, airplane and bus.

2. Total number of non-resident passengers travelling by each mode during the respective four seasons of the year.

As an integral part of establishing the sample frames, it was necessary to calculate the number of surveys to be distributed to each mode. This required estimating the total number of 1977 non-resident motor vehicle, air, and bus passengers to achieve a total count of non-resident travellers. The total number of non-resident passengers for each mode was then divided by the total of all the modes to arrive at the percentage that each mode constituted of the total. The amount of air and especially bus travel in the State constitutes a low percentage of the total non-resident passenger volume which made it necessary to increase the percentage factors by several points. If the actual modal distribution percentages had been utilized and applied to the 10,000 sample size figure, a smaller air res-

ponse rate would have occurred and a very minimal amount of bus travel information would have been obtained. In essence, motor vehicle traffic is so dominant in the State that modifications to the distribution patterns was mandatory because of the sample size.

After the total number of surveys to be distributed to each travel mode was determined, the next procedure involved delineating how many surveys were to be distributed during each of the four survey seasons. To accomplish this a very detailed research effort was required in order to obtain the most accurate seasonal travel distribution information.

Due to working with five separate states, it was necessary to create a common analytical base for each mode throughout the five-state Old West Region. Motor vehicle and airplane data information were the most complete of the four modes while bus and train data proved to be the most deficient.

Motor Vehicle Sample Frame Stratification

The distribution of survey instruments to motor vehicle travellers was based on available non-resident traffic count statistics (average daily traffic) for highway border corssings in the State. This information was obtained from the State Highway Department which supplied annual and/or seasonal statistical data as well as traffic flow maps when available. In most cases, traffic data was obtained from either manual or automatic count stations located nearest State border crossings.

Monthly non-resident ADT percentage data was utilized to stratify the sample by the four seasons of the year. The percentage that each month was to the annual average daily traffic were averaged for each highway type. The numbers calculated were then applied to the annual average daily traffic count for the highway type at each border crossing to determine that month's non-resident traffic flow. In most circumstances, monthly ADT percentages represented total traffic and since non-resident traffic is known to fluctuate disproportionately to the total, it was necessary to make monthly adjustments to account for increased summer travel and recreation participation by non-residents in the State. The monthly adjustments were developed through contact with state recreation officials who indicated that the monthly percentages should be weighted to account for the higher proportion of non-resident travel and recreation participation during the summer months.

The weighted percentages were then multiplied times the average annual traffic count and aggregated to reflect the seasonal ADT percentage allocated. The seasonal ADT percentage was used to calculate the total number of motor vehicle surveys that were to be distributed or utilized for interviewing purposes during each season. Based on the annual average traffic count for each highway border crossing, a minimum annual daily average non-resident traffic count was arrived at for the purpose of randomly selecting the survey locations. Only those locations that surpassed a minimum ADT volume were submitted for possible selection through the use of random number tables. Roads having larger non-resident ADT volumes were more likely to be randomly selected as survey locations due to a traffic volume weighting procedure. In addition, an attempt was made to

continue selecting highways and roads until approximately 60 percent of the State's total annual non-resident traffic volume was attained. Table 1 illustrates the highway survey location sites randomly selected and the percent of foreign ADT. The percent of foreign ADT was utilized to calculate the number of questionnaires to be distributed at each location through the course of each season. It should be noted that throughout the fall, winter, and spring seasons there was a slight fluctuation in the ADT percentages that were utilized due to the fact that a few roads were dropped from the survey. The roads surveyed during each of the four seasons are identified in the respective four Seasonal Summary Statistical Reports. A few lower volume roads were eliminated as a result of manpower surveying considerations and poor weather conditions. However, this modification did not affect the objective to survey a minimum of 60 percent of the State's seasonal non-resident traffic volume.

TABLE 1

SELECTED HIGHWAY SURVEY LOCATION SITES
MONTANA

Location	Percent of Foreign ADT	Location	Percent of Foreign ADT
I-90 West of St. Regis, Montana	25.8	I-15 South of Dillon, Montana	6.2
U.S. 87/I-90 Northwest of Sheridan, Wyoming	15.5	I-15 North of Shelby, Montana	5.8
I-94 East of Glendive, Montana	14.2	U.S. 212 Southwest of Billings, Montana	4.8
U.S. 191 Southwest of Bozeman, Montana	10.7	U.S. 93 North of Eureka, Montana	4.0
U.S. 89 North of Gardiner, Montana	10.6	M. 87 West of Yellowstone Park	2.4

Source: Oblinger-McCaleb, Architects, Engineers, and Planner.

Air and Bus Sample Frame Stratification

A sampling frame very similar to the automobile methodology was utilized for the purpose of surveying commercial airline and bus travellers. The major work task involved gathering airline and bus traffic volumes on a seasonal basis and determining the number of survey instruments to be distributed at various terminals in selected cities throughout the State. The airline data supplied for the year 1977 represented non-resident passenger boardings at randomly selecteu airports served by commercial carriers. T.A.P., Inc., aviation consultants located in Bozeman, Montana, supplied the necessary airline information which was extracted from Civil Aeronautics Board statistics.

All airports in the State were ranked according to the percentage they constituted of the total origin and destination volume. The highest ranked airport was selected as a survey location, then the second highest airport was chosen, and so forth until at least 60 percent of the origin and destination total had been chosen. When establishing the seasonal sampling frame, only boarding totals were used based on the need to interview only those travellers who had spent time in the State opposed to interviewing travellers who had just arrived. As was the case with the automobile sample design, the percent factor of seasonal non-resident boardings at selected airports was applied to the total number of surveys to be distributed to non-resident airline passengers for each season. The identification of the airports surveyed is included in each Seasonal Summary Report.

Data for non-resident bus passengers was limited.[1] The most useful information concerning bus passengers was that nationally 4 to 5 percent of all travellers travelled by bus while within the five-state Old West Region people travelling by bus averaged between 1.5 percent to 2 percent. It was necessary to estimate bus passenger volumes by using the total number of bus routes through individual cities and towns in the State since non-resident bus passenger volume data was not available. It was assumed that if a city or town had a larger number of routes, it had a larger share of the bus passenger volume.

Russell's Official National Motor Coach Guide was used to determine the number of routes through the State's cities and towns. The larger municipalities in the State were chosen as survey locations since they were served by the largest number of interstate bus routes.

Surveying bus travellers proved to be difficult throughout the course of the study since there was a minimal number of non-resident passengers at most selected bus stations.

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[1] Sources contacted for bus passenger data included the State of Colorado Public Utilities Commission, Greyhound Lines, Inc., Division of Trailways, Inc., and the American Bus Association.

Sample Survey Implementation

As illustrated on the following map, the five states comprising the Old West Region were divided into four administrative subregions for the purpose of implementing the survey in an efficient and cost-effective manner. The subregions were created to lessen the travel distances that the three to five member crews were required to travel to reach the assortment of survey locations. The crew members were primarily comprised of college students who were trained and supervised by Consultant staff as well as assistance provided by university professors located in Bozeman, Montana; Fargo, North Dakota; and Lincoln, Nebraska. A crew supervisor was also assigned to each crew who was primarily responsible for insuring that the sampling quoatas at every given location were met in accordance with the trip schedules and sample frames developed by the Consultant. The actual number of survey instruments distributed by survey location and date is contained on the seasonal magnetic tapes.

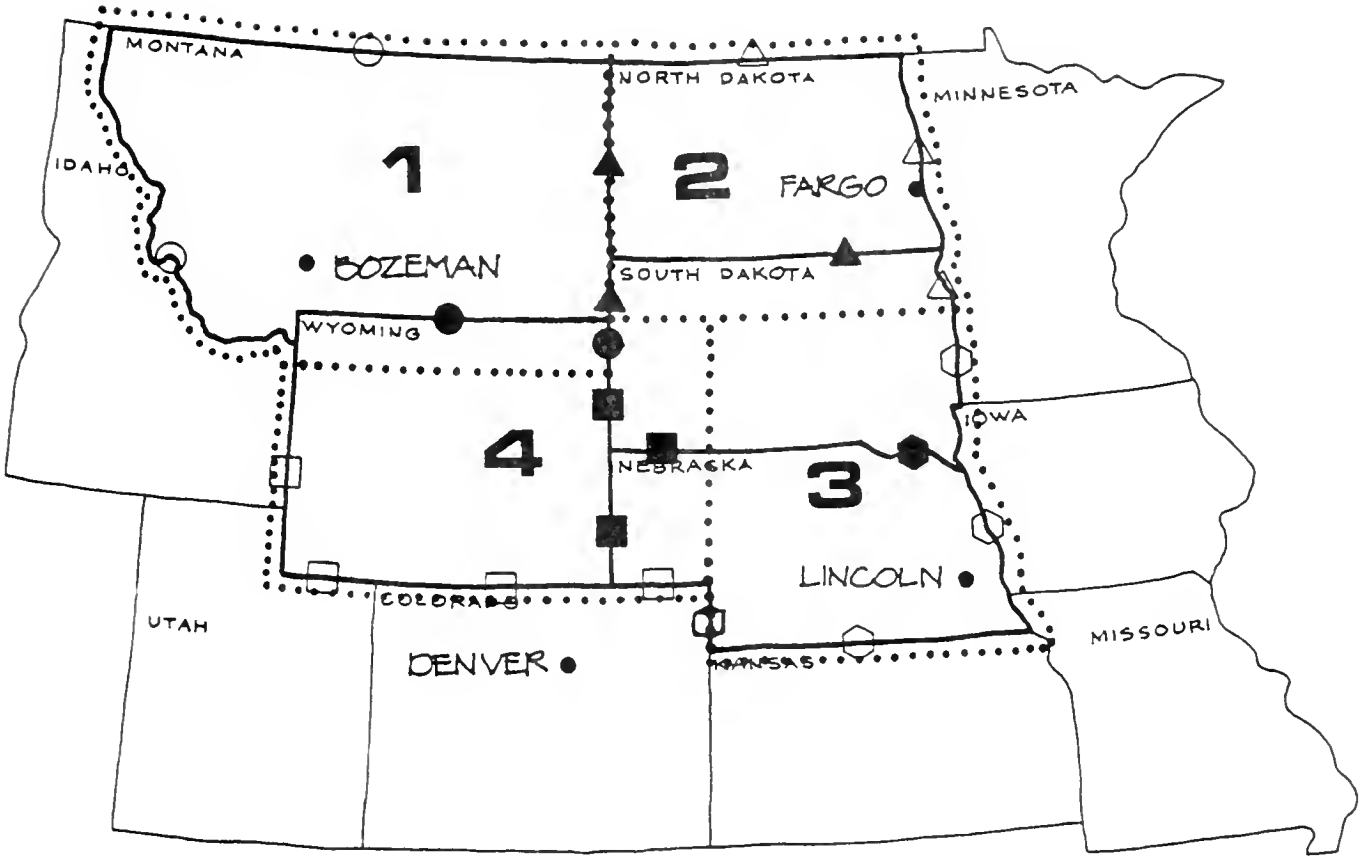
As mentioned earlier, non-resident motor vehicles (excluding commercial traffic) were stopped on a random basis at the selected border sites. The crews used a signage system and a flagging technique that was approved by the State Highway Department. The Highway Department's assistance was a key element of implementing the motor vehicle portion of the survey since they provided the necessary signage equipment, explained the required safety procedures, and helped identify suitable survey locations throughout the project.

The Consultant was responsible for the various costs associated with transporting the crews and the assortment of surveying equipment. This travel aspect of the study proved to be very costly and at times entailed logistical obstacles. This was a result of employing seven crews during the summer; each crew was required to have access to a van or truck to transport the survey equipment (signs, stands, cones, etc.); and in most circumstances the travel distances between the survey sites was extensive. Thus, the renting, maintenance, and operation of vehicles as well as crew per diem travel expenditures constituted a larger than expected portion of the available project budget.

At intra-regional border locations (adjacent Old West States) the crews were able to distribute questionnaires and undertake personal interviews for two states simultaneously. At an intra-regional survey site established on one side of the road, the crews recorded enumeration data and distributed survey instruments to out-of-state travellers as they entered the State. In addition, with the same signage setup, non-resident passengers leaving an adjacent Old West State were stopped for the purpose of undertaking a personal interview to collect travel and recreation participation information pertaining to that particular state. Of course, when the survey site was changed to the opposite side of the road, the work procedures accomplished were reversed.

The survey crews were also required to travel to selected cities and towns in the State to distribute questionnaires and undertake personal interviews at selected airport terminals and bus stations. The administrative staff at the various airports and bus stations were contacted in advance

ADMINISTRATIVE SUB REGIONS
FOR FIELD SURVEY PURPOSES



SUB REGION	OFFICE	INTER - REGIONAL	INTRA - REGIONAL
1	BOZEMAN	○	●
2	FARGO	△	▲
3	LINCOLN	⬡	⬢
4	DENVER	□	■

•••••• SUB REGION BOUNDARIES

Map 1

of actual surveying in order to explain the importance of the study and to obtain permission to undertake the surveying. The crew supervisors also contacted the appropriate airline and bus officials prior to the time the actual surveying was to commence, informing them of the specific companies to be surveyed and the general methodology that would be used. After receiving final approval, the crew members proceeded to the appropriate gates where passengers were preparing to board their scheduled plane or bus.

The first question addressed pertained to determing if a passenger was a resident or a non-resident. Resident passengers were merely thanked for their time, while non-residents were asked to reply to the respective enumeration questions and were then given a questionnaire or interviewed.

Sample Response Rates

Table 2 illustrates the number of surveyes distributed in each of the four respective seasons, the number of usable surveys returned and the corresponding response rates.

TABLE 2

TOTAL RESPONSE RATES BY SEASONAL DISTRIBUTION
MONTANA

Season	Surveys Distributed	Percent Distributed	Surveys Returned	Response Rate
Summer	5,610	56.8	1,939	34.6
Fall	1,626	16.5	583	35.9
Winter	757	7.7	396	52.3
Spring	1,887	10.0	595	31.5
TOTAL	9,880	100.0%	3,513	35.6%

Source: Oblinger-McCaleb, Architects, Engineers, and Planners - 1980.

As shown in the table, a total of 9,880 surveys were distributed through the course of the survey and 3,513 surveys were returned for a total reponse rate of 35.6 percent. Thus, the accompanying computer tapes contain 9.880 enumeration records and 3,513 survey instrument records. The sample size of 10,000 was not quite met due to an assortment of survey distribution problems encountered during the winter survey season.

3 Survey Instrument

Introduction

The previous chapter outlined the methodology used in surveying travellers to the Old West Region. The principal means by which out-of-state travellers were surveyed was a diary-type questionnaire. An example of the survey instrument utilized is included on the following page.

Questionnaire Layout

The information to be collected by using the questionnaire basically consisted of trip information (such as how the price of gasoline was affecting a traveller's trip, trip destination, what influenced the traveller to go to that destination, and average daily expenditures for various items) and recreation participation information. In order to simplify the handling of the questionnaire by travellers, it was determined that the questionnaires consist of one sheet of paper. This also reduced the costs of printing and postage. Utilizing one sheet facilitated the layout of questions into two parts(trip information and recreation participation information) and the questionnaire was designed accordingly.

Each questionnaire was printed with a serial number which identified the state in which it was distributed and the number of the questionnaire. The serial number was recorded on an enumeration form which was completed by the survey crews at the point of distribution. On this enumeration form was encoded information such as origin, number of persons in travel party, and age of persons in travel party. With the questionnaire and enumeration form all information for the project was collected. The use of the enumeration forms allowed some information to be collected visually (such as number in travel party) which provided additional space on the actual questionnaire for more involved questions. The data on the enumeration forms could also be used to more accurately estimate the total number of non-resident travellers in the State. The enumeration form information was collected for the entire survey sample on the enumeration forms, whereas less information would have been collected by using the questionnaire since only a portion of the total number of questionnaires handed out were returned.

The questionnaire was standardized so it could be used for all transportation modes. This facilitated computer coding of the data which allows eventual comparisons to be made of travellers by mode. Moreover, the questions were structured to facilitate computer coding of the data. For trip information, a respondent was to check the appropriate box or provide a short answer to the question. For recreation participation, a respondent was to keep a "diary" of his recreation activities. This entailed recording the date, recreation area or general location, number of persons, and code for each activity he participated in each day. The activity codes were listed on the right-hand legend of the diary.

We Need Your Help!

This is a survey of non-resident travel and recreation in the Old West Region in which the state of Nebraska is a member. The State of Nebraska is very interested in obtaining reliable information from you in order to improve your travel and recreation experience. The information you provide us will be kept confidential with only general results made available to organizations dealing with tourism and recreation.

You can help the state by responding to the questions on this side of the survey and by keeping a log of your recreation activities on the opposite side in the space provided. Instructions for keeping the log are included on the opposite side. It is important that you fill out this side of the survey and return it even if you do not engage in any recreation activities in the State.

When your visit to Nebraska is over, fold this survey according to the instructions on the opposite side and drop it in any mailbox in the United States. NO STAMP IS NECESSARY.

We sincerely thank you for your cooperation and by responding we hope to make your stay in the state even more enjoyable in the future. Have a safe and pleasant trip!

Trip Information

1. How have the following factors affected your current trip to or through this State? (Please check all applicable affects.)

	Present Price of Gasoline	Present Availability of Gasoline
1. No influence	☐1	☐1
2. Shorter trip	☐2	☐2
3. Longer stay(s) at destination(s)	☐3	☐3
4. Fewer side trips	☐4	☐4
5. Cancelled other trips	☐5	☐5
6. Changed mode of transportation	☐6	☐6

2. How would the following factors affect a future trip to or through this State? (Please check all applicable affects.)

	Gasoline $1.25 per Gallon	Gasoline $1.50 per Gallon	Gasoline Rationing
1. No influence	☐1	☐1	☐1
2. Shorter trip	☐2	☐2	☐2
3. Longer stay(s) at destination(s)	☐3	☐3	☐3
4. Fewer side trips	☐4	☐4	☐4
5. Cancel other trips	☐5	☐5	☐5
6. Change mode of transportation	☐6	☐6	☐6
7. Travel closer to home	☐7	☐7	☐7

3. Please list the number of days and nights you stayed in this State.

days ______ nights ______

4. Please list the destination of your trip. (Be as specific as possible by listing name of recreation area and/or city/town and State, Canadian Province, or foreign country.)

Recreation area ______
City/Town ______
State ______
Canadian Province ______
Foreign Country ______

OFFICE USE ONLY
☐☐☐☐☐

5. Which of the following States have you visited or will you visit during the course of this trip? (Please check the appropriate box or boxes below)

Montana	Wyoming	North Dakota	South Dakota	Nebraska
☐1	☐2	☐3	☐4	☐5

6. Please indicate your mode (or modes) of travel on this trip by checking the appropriate box or boxes below.

Automobile	Recreation Vehicle (Camper)	Bus	Airplane	Train	Motor Bike
☐1	☐2	☐3	☐4	☐5	☐6

7. Please indicate the purposes of your trip in this State by placing a check in the appropriate boxes below.

Vacation or Recreation	Visit Friends or Relatives	Business	Convention	Just Passing Through
☐1	☐2	☐3	☐4	☐5

8. If you checked the Vacation or Recreation box in question 7 above as a purpose of your trip to this State, what factors influenced your choice? (Please check the appropriate box or boxes below.)

☐1 State Published Promotional Literature
☐2 Advertising (magazines, T.V., radio)
☐3 Scenery
☐4 Recommended by Others
☐5 Previous Visit
☐6 Outdoor Recreation Opportunities

Other Factors (Please list)
☐ ______
☐ ______
☐ ______

9. Please estimate your expenditures, for the average day, at the following types of business establishments in this State. (Please place your dollar estimates in the appropriate boxes)

Hotel/ Motel	Camp ground	Eating & Drinking	Grocery	Sporting Goods	Gasoline/ Auto Repair	Amuse-ment/ Recreat'n	Gifts, Film, & Other

10. What is your approximate annual income?

Annual Income	Family (check one box)	Unrelated Individual (check one box)
Less than $5,999	☐1	☐1
$ 6,000 - $ 9,999	☐2	☐2
$10,000 - $14,999	☐3	☐3
$15,000 - $24,999	☐4	☐4
$25,000 - $49,999	☐5	☐5
$50,000 and over	☐6	☐6

11. Please list the principal travel route(s) that you used while visiting this State. (Please use U.S. or State route numbers--for example I-80, U.S. 25, or State 15.)

Route Numbers
______

12. Please list the attractions and events you visited in this State on your trip and check the primary influence for visiting each. Attractions include museums, historic sites, natural wonders, etc., while events include spectator sports, conventions, festivals, etc.

	Primary Influence for Visiting							
Attraction or Event	Pre-vious Visit	Friends/ Rela-tives	Radio/ TV Ads	High-way Infor-mation Center	Road Signs	State Pub-lished Liter-ature	Other Liter-ature	Other
______	☐	☐	☐	☐	☐	☐	☐	☐
______	☐	☐	☐	☐	☐	☐	☐	☐
______	☐	☐	☐	☐	☐	☐	☐	☐
______	☐	☐	☐	☐	☐	☐	☐	☐
______	☐	☐	☐	☐	☐	☐	☐	☐
______	☐	☐	☐	☐	☐	☐	☐	☐
______	☐	☐	☐	☐	☐	☐	☐	☐
______	☐	☐	☐	☐	☐	☐	☐	☐

Recreation Participation Information

Instructions

Each time you stop to engage in an outdoor recreation activity in this state please enter the date and the name of the recreation area (or general location) on the chart below. In addition, please list on the chart the number of persons in your group who actually participated in any of the activities listed to the right and then enter the corresponding activity numbers. Please be as specific as possible.

An example has been provided for your convenience on the first few lines of the chart below. The example shows that on July 7th a group of four visited Red Rock State Park and that one member hiked for several hours, three members fished at a stream, and the entire group camped in a public campground.

OFFICE USE ONLY	Date	Recreation Area or General Location	Number of Persons	Activity Number
	7/7/79	Red Rock State Park	1	8
	7/7/79	Red Rock State Park	3	12
	7/7/79	Red Rock State Park	4	2

When you have completed this activity log, please fold this survey according to the instructions to the right and mail it in.

Moisten Here

(2) Fold Here

Activity Numbers:

Camping

1 Primitive campground or in the open
2 Public campground with modern services (water, restrooms, etc.)
3 Private business campground
4 Organizational or special camp for groups

Picnicking (Not Associated With Camping)

5 At highway rest stops
6 Park picnic area with tables
7 An area without tables

Hiking/Backpacking

8 Day hiking
9 Backpacking (overnight)

Jogging

10 Jogging

Horseback Riding

11 Horseback riding

Fishing

12 Stream/River
13 Lake, from shore
14, Lake, from boat
15 Ice fishing

Hunting

16 Hunting

TO MAIL:
(1) Fold right flap over.
(2) Fold left flap over.
(3) Moisten edge of flap and seal. Please be sure the "Business Reply Mail" side appears on the outside.
(4) Drop in any mailbox. No postage is necessary. THANK YOU!

(1) Fold Here

Off-Highway Vehicle Use

17. Motorcycles
18 Other vehicles (jeeps, trucks, etc.)

Snowmobiling

19 Snowmobiling

Golf / Tennis

20. Golf - all types except miniature and practice ranges
21. Tennis

Swimming

22. Public Pool
23 Private (motel, hotel, etc.) pool
24 Other (beaches, etc.)

Boating

25 Power boating (except waterskiing)
26 Waterskiing
27 Sailing
28 Canoe/raft, in river
29 Canoe/raft, in lake

Skiing

30. Downhill skiing (Alpine)
31 Cross country skiing

Miscellaneous

32. Visiting special attractions (museums, zoos, amusement areas)
33. Visiting historical sites
34. Attending events (rodeos, fairs, carnivals, etc.)

MOTOR VEHICLE ENUMERATION FORM

(Place the symbol PI before the serial number if a personal interview was undertaken)*

DATE __________ STATE __________ HIGHWAY NUMBER __________

Serial number __________
Type of vehicle
(Use code number) __________
Name: __________
Home
Address: __________
(include
zip code) __________
Number in travel group __________
Ages of individuals in travel group
____

Serial number __________
Type of vehicle
(Use code number) __________
Name: __________
Home
Address: __________
(include
zip code) __________
Number in travel group __________
Ages of individuals in travel group
____

Serial number __________
Type of vehicle
(Use code number) __________
Name: __________
Home
Address: __________
(include
zip code) __________
Number in travel group __________
Ages of individuals in travel group
____

Serial number __________
Type of vehicle
(Use code number) __________
Name: __________
Home
Address: __________
(include
zip code) __________
Number in travel group __________
Ages of individuals in travel group
____

Serial number __________
Type of vehicle
(Use code number) __________
Name: __________
Home
Address: __________
(include
zip code) __________
Number in travel group __________
Ages of individuals in travel group
____

Serial number __________
Type of vehicle
(Use code number) __________
Name: __________
Home
Address: __________
(include
zip code) __________
Number in travel group __________
Ages of individuals in travel group
____

Serial number __________
Type of vehicle
(Use code number) __________
Name: __________
Home
Address: __________
(include
zip code) __________
Number in travel group __________
Ages of individuals in travel group
____

Serial number __________
Type of vehicle
(Use code number) __________
Name: __________
Home
Address: __________
(include
zip code) __________
Number in travel group __________
Ages of individuals in travel group
____

*(At the end of each day please staple this form to the Motor Vehicle Daily Log sheet)

AIR, BUS AND RAIL ENUMERATION FORM

(Place the Symbol PI before the serial number if a personal interview was undertaken) *

DATE: ______________________ STATE: ______________________

CITY/TOWN: ______________________ NAME OF COMPANY: ______________________

FLIGHT NUMBER ETC. ______________________

Serial number: ______	Serial number: ______
Name: ______	Name: ______
Home Address: ______	Home Address: ______
(include zip code) ______	(include zip code) ______
Number in travel group: ______	Number in travel group: ______
Ages of individuals in travel group: ______	Ages of individuals in travel group: ______
Serial number: ______	Serial number: ______
Name: ______	Name: ______
Home Address: ______	Home Address: ______
(include zip code) ______	(include zip code) ______
Number in travel group: ______	Number in travel group: ______
Ages of individuals in travel group: ______	Ages of individuals in travel group: ______
Serial number: ______	Serial number: ______
Name: ______	Name: ______
Home Address: ______	Home Address: ______
(include zip code) ______	(include zip code) ______
Number in travel group: ______	Number in travel group: ______
Ages of individuals in travel group: ______	Ages of individuals in travel group: ______
Serial number: ______	Serial number: ______
Name: ______	Name: ______
Home Address: ______	Home Address: ______
(include zip code) ______	(include zip code) ______
Number in travel group: ______	Number in travel group: ______
Ages of individuals in travel group: ______	Ages of individuals in travel group: ______

*(At the end of each day please staple this form to the Air, Rail or Bus Daily Log sheet.)

Return of Questionnaires

Since travellers were asked to keep a diary of their recreation activities, they were to keep the questionnaires and return them when their trips were concluded. This also meant that a means for returning the questionnaires was needed. Asking travellers to mail them back at their own expense was considered impractical and the response rate probably would have been very low. It was believed that providing the travellers with a way to mail back the questionnaires would increase the response rate. Pre-addressed and stamped envelopes attached to the questionnaires were considered, but they could easily be lost or the stamps removed. This method conceivably would have lowered the response rate and increased the overall project costs.

The best way to circumvent the postage and envelope problems was to utilize business reply mail. This allowed the questionnaires to be returned without prepayment of postage; that it, without the purchase of a stamp by the individual travellers. No envelope would be needed since the business reply mail segment would appear on the outside of the questionnaire. When sealed and dropped in any mailbox, the questionnaire was mailed to the address shown.

Nearly all of the returned were folded correctly. A small percentage were torn apart and fastened together in some manner, but usually with the business reply mail side showing. For some reason, a few were returned in stamped envelopes. Business reply mail does not apply in Canada and a few tourists did not mail them as they left the U.S. However, a small percentage of Canadian travellers attached a stamp and mailed the questionnaires from Canada.

Business reply mail was chosen because it may be distributed in any quantity for return to any post office in the United States without prepayment of postage by the individual respondent. However, several procedures must be followed prior to the use of business reply mail. A permit, for which an annual fee of $30 is charged for each calendar year, is required to distribute business reply mail. An application for a permit must be submitted at the post office where the mail will be returned. When the application is approved the permit holder is issued a permit number which identifies all mail to be returned to the holder. Permit holders have the option of keeping a business reply mail advance deposit trust account at the post office (for which an accounting fee of $75 is required) or paying postage due charges to the carrier upon delivery. In the case of this survey, it was believed more convenient and less costly to establish a trust account due to the anticipated amount of return mail. As questionnaires were returned, the postage due was subtracted from this advance deposit trust account. Utilizing the trust account, the postage due was regular first class postage plus a surcharge of 3.5 cents per piece. If no advance deposit trust account had been maintained, the amount of postage due would have been regular first class postage plus a surcharge of 12 cent per piece.

Other procedures which must be followed to utilize business reply mail con-

cern the format of the address side of business reply mail. Generally, any photographic, mechanical, or electrical process or combination of processes, other than handwriting, typewriting, or handstamping, may be used to prepare the address side of the business reply mail. The background of business reply mail pieces may be any light color that allows the address, postmark, and other required endorsements to be readily discerned. The format of the business reply mail must comply with exact dimensions, layouts, and specifications as prescribed by the U.S. Postal Service. These specifications are quite detailed and will not be discussed here. Further information can be obtained by consulting Publication 115, Business Reply Mail Regulations, available at any post office.

Postal inspection of sample reply pieces is normally not required prior to distribution by permit holders. However, permit holders are encouraged to submit sample pieces to their local postmaster for review. Doing so avoids the possible inconvenience and cost of reprinting if the Postal Service determines that business reply format requirements are not being met and that existing unapproved pieces are not mailable.

4 Data Processing

Introduction

The data processing phase of the study included numerous procedural steps and for the sake of simplification a description of the steps undertaken has been divided into two major topic catagories. The first topic, General Description, describes the steps involved in the actual manual coding and processing of the data. This discussion does not delve into the technical details of computer processing, but concentrates on the coding and physical steps involved in processing the survey data. The second topic, Technical Description, describes record layouts, the data format of the magnetic tapes, the SPSS program used to produce the statistical summaries, and other information of use to the technician. This division reflects the varying interests of the data users and permits the users to locate areas of concern without searching through various descriptions of no interest. Taken together, the two topics provide a complete description of the data processing methodology utilized as well as indicate the necessary information required for complete user access to the raw data contained on the magnetic tapes.

General Description

The physical processing of survey instruments and field enumeration forms can be broken down into the following steps:

1. Coding and sorting the data
2. Keypunching survey instruments and enumeration forms
3. Editing, sorting record alignments, production of activity days tabulations, and
4. Final processing and report writing utilizing the Statistical Package for the Social Sciences.

The following data processing discussion corresponds to the four steps outlined above. This will convey the full scope of the methodology used and provide detailed information on the contents of the data tapes produced. Once a full understanding of the data and its structure is reached, the full flexibility of the data tapes for further analysis can be realized.

Step 1 - Data Coding and Sorting

Several items on both the enumeration forms, which were completed in the field by the survey crews, and the survey instruments required coding conversions from alpha-numeric (words and phrases) to a pure numeric form. The reason for this is that for statistical purposes, alpha-numeric is extraordinarily inefficient or in some cases simply not applicable for computer processing.

On the enumeration forms the following items required in-house coding*. First, each Old West Region state was given a code of one through five. The coding was as follows:

1. Montana
2. Wyoming
3. North Dakota
4. South Dakota
5. Nebraska

Next, the survey locations for all states were given a two digit numeric code. For instance, U.S. 191 south of Bozeman, Montana was given a code of "81". In total there were 73 survey locations each with its own location code.

The last item which required alpha-numeric to numeric coding was the home address of the travel party. For purposes of tabulating origination data for the travel parties, the home state was given a two digit code. All states as well as the Canadian provinces were given individual codes. All other locations such as other foreign countries were coded "99".

The remaining information on the enumeration form for each travel party (date, survey serial number, vehicle code, number in travel group and the ages of individuals) required no coding since this information was already in numeric form.

The survey instrument can be conveninetly divided into two parts, trip information on the one side and the recreation participation information on the reverse side. With respect to the trip information side, question 4 dealing with trip destination required in-house coding. When a specific recreation area was listed as a destination, this location was located through secondary data sources and was then coded into the applicable state recreation planning region. The destination state, Canadian province or foreign country was also coded according to the two digit numeric code established previously for the place of origination. The remaining information on this side of the questionnaire required no coding conversions.

The reverse side of the questionnaire, recreation participation, consisted of the diary/log-book entries. For each diary line completed by the travel party, the recreation area or general location was again located and coded into its appropriate state planning region. This enabled the computation of activities days by activity type by planning region for each state.

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*Refer to Chapter 3 for reproductions and descriptions of the enumeration form and Chapter 2 for survey instrument and distribution techniques.

Step 2 - Keypunching Survey Instruments and Enumeration Forms

The information contained on the enumeration forms and survey instruments was keypunched, verified, then transferred directly onto magnetic tape. This removed the cumbersome burden of handling literally tens of thousands of computer cards and retained the integrity of the data throughout the remainder of data processing.

Step 3 - Editing

Once the survey information was transferred onto magnetic tape, the information underwent an editing procedure which further checked for illegal information keyed onto the tapes. Next, the recreation participation information was removed from the other survey instrument data and was transferred onto separate magnetic tape for each state due to the length of the data field. The enumeration information pertaining to each travel party was then matched to the corresponding returned surveys producing a single data record of all information for each travel party. The matched data records and the unmatched enumeration entries (meaning no returned survey) were then written onto a separate megnetic tape for each state.

The final stage in this step of the data processing was to process the tapes containing the recreation participation information. This produced a tabulation of the number of activity days by activity and by state planning region. The recreation participation data was then written as a separate block of information onto the tape containing the other survey data for the corresponding state.

Step 4 - Final Processing

The magnetic tapes containing all the information for each travel party were then processed using the Statistical Package for the Social Sciences (SPSS). This produced the statistical summary reports for each season of surveying. This completed the processing of the magnetic tapes which contained the trip information and the enumeration form information.

Technical Description

The structure of data format was designed to allow maximum flexibility for analysis and ease of information access for the users. The information contained in this section is subdivided under the following headings:

1. Survey Products
2. Coding and Levels of Analysis
3. Record Formats
4. Magnetic Tape Formats
5. SPSS Specifications

Survey Products

The survey processing was conducted in batches by season. This resulted in each state receiving one two-file tape per season for a total of four magnetic tapes. On each tape, the first file contains the enumeration/survey data and the second file contains the recreation participation data. From each magnetic tape a statistical summary report was produced. This resulted in each state receiving one volume per season. The four magnetic tapes, the four statistical summary reports, and these documents together with the enumeration forms and survey instruments themselves constitute the products of the Old West Region Travel and Tourism Study.

Coding and Levels of Analysis

The coding of alpha-numeric data to numeric was conducted in order to facilitate the data processing. (See Section A, Part 1.) For those questions on the survey instrument which required the respondent to check a box, if the box was checked it was keypunched as a "1", if it was not checked it was left blank and keypunched as a "0".

Questions 1 and 2 deserve additional comment in order to properly interpret the survey results. These questions permit multiple responses and allow for three levels of analysis. First, because each box is an independent item, the results can therefore be analyzed independently of the others. On this level, for instance, Question 1 is in effect twelve independent pieces of information. The next possible level of analysis involves the column headings which divide Questions 1 and 2 into either two or three possible groups respectively. The third and broadest level of aggregation are the questions taken as whole. This level has little significance except for tabulating non-responses to the question.

Certain items on the questionnaire required the respondent to provide information or "fill in the blank". Questions 3 and 4 are of particular interest with respect to how "no responses" were interpreted. Since there was no way to distinguish the non-response of an item from the equally as likely possibility that the item was not applicable, all blanks were counted in the tabulation as a non-response. This procedure provided a conservative count as to the number of travel parties responding and did not bias the results by making any unwarranted assumptions.

Record Formats

Every item on the questionnaire was broken down to its most logically elementary level. These pieces of data were separately coded onto the magnetic tapes. All the data associated with a given questionnaire/enumeration form entry constitutes one logical record on the first file of every magnetic tape. For the recreation participation part of the questionnaire, each log book entry constitutes one logical record on the second file of every magnetic tape. Therefore, the number of records in the first file (trip information) of each of the tapes is equal to the number of travel parties for which information was recorded on a enumeration form. Likewise, the number of records in the second file (recreation participation informa-

tion) of each of the tapes is equal to the total number of log book entries for that state for that season.

As previously stated, every record consists of various data items in a given order. Since the contents of each data item will vary record by record, each data item is therefore a variable. Each of the records in the first file consists of 93 variables or pieces of data. The records of the second file consist of 9 variables or data inputs. (The concept of a "variable" is important within the context of a statistical program such as the Statistical Package for the Social Sciences.)

The order and description of the variables in the records in the first file are given in Table 3 .

Magnetic Tape Formats

The magnetic tapes, which contain the raw data, were written according to the following specifications.

- 9 track
- 1600 bpi
- E B C D I C
- Two files per tape
  1. File 1 - Enumeration/Survey
     - 1 record per block
     - 137 characters per record
  2. File 2 - Recreation Participation
     - 1 record per block
     - 19 characters per record

Each record tape is also labeled with the state name, season, unblocked, 166 bpi as well as the record size for files 1 and 2 in order to facilitate user convenience and safety.

SPSS Specifications

The statistical compilation of the survey data and report production was accomplished using the Statistical Package for the Social Sciences (SPSS) versions 7.0 and 8.0[1]. The operating system was located at the University of Colorado and was a Control Data Corporation 6400 computer using the KRONOS 2.1 operating language.

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[1] Statistical Package for the Social Sciences, Norman H. Nie, C. Hadlai Hull, Jean G. Jenkins, Karen Steinbrenner and Dale H. Brent; McGraw-Hill Book Company, 1970.

TABLE 3

ORDER, COLUMN AND DESCRIPTION OF VARIABLES
FOR RECORDS IN THE FIRST FILE

Enumeration Form Information Collected

Column	Variable		Description
1- 2	Var	1	Month of Survey Distribution
3- 4	Var	2	Day of Survey Distribution
5- 6	Var	3	Year of Survey Distribution
7	Var	4	State of Code[1]
8- 9	Var	5	Survey Location Code[1]
10	Var	6	Personal Interview/Non-Interview
11-15	Var	7	Enumeration Serial Number
16-17	Var	8	Vehicle Code[1]
18-19	Var	9	Home State Code[1]
20-21	Var	10	Number in Travel Party
22-23	Var	11	Age of Individual 1 in Travel Party
24-25	Var	12	Age of Individual 2 in Travel Party
26-27	Var	13	Age of Individual 3 in Travel Party
28-29	Var	14	Age of Individual 4 in Travel Party
30-31	Var	15	Age of Individual 5 in Travel Party
32-33	Var	16	Age of Individual 6 in Travel Party
34-35	Var	17	Age of Individual 7 in Travel Party
36-37	Var	18	Age of Individual 8 in Travel Party
38-39	Var	19	Age of Individual 9 in Travel Party
40-41	Var	20	Age of Individual 10 in Travel Party
42	Var	21	Mode Surveyed (auto, air, bus, rail)
43	Var	22	State Code[1]

Questionnaire Information Collected

44-48	Var	23	Survey Serial Number
			Question 1
49	Var	24	Present Price of Gas - No Influence
50	Var	25	- Shorter Trip
51	Var	26	- Longer Stay(s)
52	Var	27	- Fewer Side Trips
53	Var	28	- Cancel Other Trips
54	Var	29	- Changed Mode of Transportation
55	Var	30	Present Availability of Gas - No Influence
56	Var	31	- Shorter Trip
57	Var	32	- Longer Stay(s)
58	Var	33	- Fewer Side Trips
59	Var	34	- Cancel Other Trips
60	Var	35	- Change Mode of Transportation
			Question 2
61	Var	36	Gasoline $1.25 per Gallon[2] - No Influence
62	Var	37	- Shorter Trip
63	Var	38	- Longer Stays(s)
64	Var	39	- Fewer Side Trips
65	Var	40	- Cancel Other Trips
66	Var	41	- Changed Mode of Transportation

Column	Variable	Description	
68	Var 43	Gasoline $1.50 per Gallon[2]	- No Influence
69	Var 44		- Shorter Trip
70	Var 45		- Longer Stay(s)
71	Var 46		- Fewer Side Trips
72	Var 47		- Cancel Other Trips
73	Var 48		- Changed Mode of Transportation
74	Var 49		- Travel Closer to Home
75	Var 50	Gasoline Rationing	- No Influence
76	Var 51		- Shorter Trip
77	Var 52		- Longer Stay(s)
78	Var 53		- Fewer Side Trips
79	Var 54		- Cancel Other Trips
80	Var 55		- Change Mode of Transportation
81	Var 56		- Travel Closer to Home
		Question 3	
82-83	Var 57	Number of Days	
84-85	Var 58	Number of Nights	
		Question 4	
86	Var 59	Destination - State Planning Region	
87-88	Var 60	Destination - State or Province[1]	
		Question 5	
89	Var 61	States Visited This Trip	- Montana
90	Var 62		- Wyoming
91	Var 63		- North Dakota
92	Var 64		- South Dakota
93	Var 65		- Nebraska
		Question 6	
94	Var 66	Modes of Travel this Trip	- Automobile
95	Var 67		- Recreation Vehicle
96	Var 68		- Bus
97	Var 69		- Airplane
98	Var 70		- Train
99	Var 71		- Motor Bike
		Question 7	
		Purpose of Trip This	
100	Var 72	State	- Vacation or Recreation
101	Var 73		- Visit Friends or Relatives
102	Var 74		- Business
103	Var 75		- Convention
104	Var 76		- Just Passing Through
		Question 8	
		What Factors Influence	
105	Var 77	Your Choice	- State Published Literature
106	Var 78		- Advertising
107	Var 79		- Scenery
108	Var 80		- Recommended by Others
109	Var 81		- Previous Visit
110	Var 82		- Outdoor Recreation Opportunities
111	Var 83		- Other

Column	Variable	Description	
		Question 9	
112-114	Var 86	Expenditures Average Day	- Hotel/Motel
116-117	Var 85		- Campground
118-120	Var 86		- Eating and Drinking
121-123	Var 87		- Grocery
124-126	Var 88		- Sporting Goods
127-129	Var 89		- Gasoline/Auto Repair
130-132	Var 90		- Amusement/Recreation
133-135	Var 91		- Gifts, Film, and Other
		Question 10	
136	Var 92	Annual Income	- Family
137	Var 93		- Unrelated Individual

[1]The following codes will be found in Appendix A: State Codes, Survey Location Codes, Vehicle Codes, Home State, and Destination Codes.

[2]Due to continuous inflation during the course of the Study, Question 2 was changed to read Gas $1.50 per Gallon and Gas $1.75 per Gallon for the Spring 1980 surveying.

Source: Oblinger-McCaleb, Architects, Engineers, and Planners.

The order and description of the variable records in the second file pertaining to recreation participation information are given in Table 4 .

TABLE 4

ORDER, COLUMN AND DESCRIPTION OF VARIABLE RECORDS IN THE SECOND FILE PERTAINING TO RECREATION PARTICIPATION

Column	Variable	Description
1	Var 1	State Code[1]
2- 6	Var 2	Serial Number
7	Var 3	State Planning Region
8- 9		- Blank -
10-11	Var 4	Month
12-13	Var 5	Day
14-15	Var 6	Year
16-17	Var 7	Number of Persons[2]
18-19	Var 8	Activity Number[3]

[1]The description of State Codes can be found in Appendix A.

[2]Number of persons participating in that activity for that day.

[3]The description of the activity numbers as given on the questionnaire are illustrated in Appendix A.

Source: Oblinger-McCaleb, Architects, Engineers and Planners.

The SPSS control cards which generated the statistical reports are printed in the front of each of the bound reports. These SPSS control cards are compatible with all SPSS compilers regardless of the computer system to which the compiler is attached. The job cards which specify job name, account number, passwords, priority, equipment requirements, any necessary file manipulations, and job limits will be specific to the operating system, used in each state and at each local installation. Regardless of the system SPSS requires a minimum of 50,000 words octol of small core memory (CM) to load.

An important feature for data users are the Var Labels and Value Labels cards which are also reproduced in the front of each of the bound statistical reports. These cards give names and values to all the information contained on the data tapes whenever one of the SPSS procedures is initiated. This facilitates the reading of the output and allows for a simple visual check on the logic employed.

One other aspect of SPSS needs to be repeated for user convenience, the subfile card. The SPSS subfile card requires that the number of records for each subfile be given. The order of the subfiles in File 1 on every tape are as follows:

1. Auto
2. Air
3. Bus
4. Rail

The number of records in each subfile are given on the first page of the reproduced card decks for each season in the bound statistical summaries.

The tabulation of the activity days on File 2, which is included at the end of each statistical summary, was accomplished at the time the second file on each tape was created. This process was run at the installation at which the tape editing and writing was conducted in order to simplify the data processing and increase the turn-around time. The computer system used was an IBM 3700. While SPSS is fully capable of performing any analysis or data manipulation with the second file, the actual activity days tabulation was accomplished using a program written in COBOL. This program has been reproduced in Appendix B.

Because the data is in an unaggregated format, literally thousands of crosstabulations, frequencies and correlations can be performed. A few of the possible frequencies and crosstabulations have already been presented in the bound statistical reports for each of the seasons surveyed. In order to demonstrate the flexibility of the data, the remainder of this section will be devoted to several examples of further analysis using SPSS*.

---

*An understanding of SPSS is desirable to fully appreciate the techniques to be described.

Examples of Further Analysis

One of the most usefull procedures in SPSS is the "select" function by which one can create sub-samples of the data using any combination of variables as criteria. For example, suppose that one was interested in knowing the income profiles for all individuals who arrived by automobile from neighboring states and had vacation or recreation as a primary purpose for their trip. The "select if" procedure would be accomplished by selecting automobiles (Var 21), for those origination states of interest (Var 60) and for those travel parties who checked Recreation or Vacation to Question 6 (Var 72). Following the select procedure, one would then initiate the frequencies procedure on Variables 92 and 93, which are family and individual incomes, respectively. A derivation on this procedure might be to run a crosstabs procedure on the neighboring states and both income variables. The actual card for this procedure would be:
Select If (((Var 21 EQ 1) and Var 60 EQ to 1 OR 2 OR 3 OR 4) and Var 72 EQ 1.)/

An article that appeared in the Denver Post during June of 1980* explained some of the reactions of senior citizens, who had bought mobile homes, with plans of "seeing America" to the increasing gas prices. The owners of several trailer parks also voiced their concerns and noted some recent trends. If this was of interest, the survey data offers insights into the trends. Again, using the Select procedure one could construct a profile for those traveling in recreation vehicles and who are over fifty-five years of age by their responses to the Questions 1 and 2 which concern gasoline price and availability. The series of Select procedures would be similar in construction to the previous example. The responses to Questions 1 and 2 could be displayed using the Frequencies procedure similar to the format in the bound statistical summaries.

Another example of further analysis is the estimation of non-resident recreation activity days. Data from this survey was used to estimate non-resident recreation activity days for the 1980 Wyoming State Comprehensive Outdoor Recreation Plan (SCORP). Numerous computer programs were run which crosstabulated recreation or vacation trip purpose, travel party size, and actual recreation participation of this group of travellers. Recreation days of the survey sample population were expanded to the total number of non-resident travellers estimated in the State. Recreation days were attributed by planning region for each recreation category. A detailed discussion of the methodology used is contained in Appendix C of this report.

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*"Rolling Slower, New Mobile Culture Slowed by Gas Prices", Denver Post, June 25, 1980; American Press International.

5 Major Findings

Introduction

The purpose of this Chapter is to present the major findings of the year-long non-resident survey. Selected results of the survey questions will be presented with comparisons made between seasons. Due to the amount of data generated, the major findings presented are for travel parties for all modes of travel unless otherwise noted.

Trip Origin

Trip origin data collected for the entire year reveals a significant pattern. In all four seasons, a majority of non-resident trips originated in the Far West, Mountain West, and Great Lakes states. Map 2 illustrates which states are included in these classifications. These states accounted for over two-thirds of all non-resident trip origins through all four seasons.

States of trip origin for the four seasons are shown in Table 5. The numbers adjacent to the states indicate the percentage of respondents who indicated that state as the origin of their trip during that season. The highest percentage of travellers originated in Washington throughout the year. California, Wyoming, and Idaho were other principal origin states during each of the seasons. These four states accounted for approximately 40 percent of trip origins throughout the year.

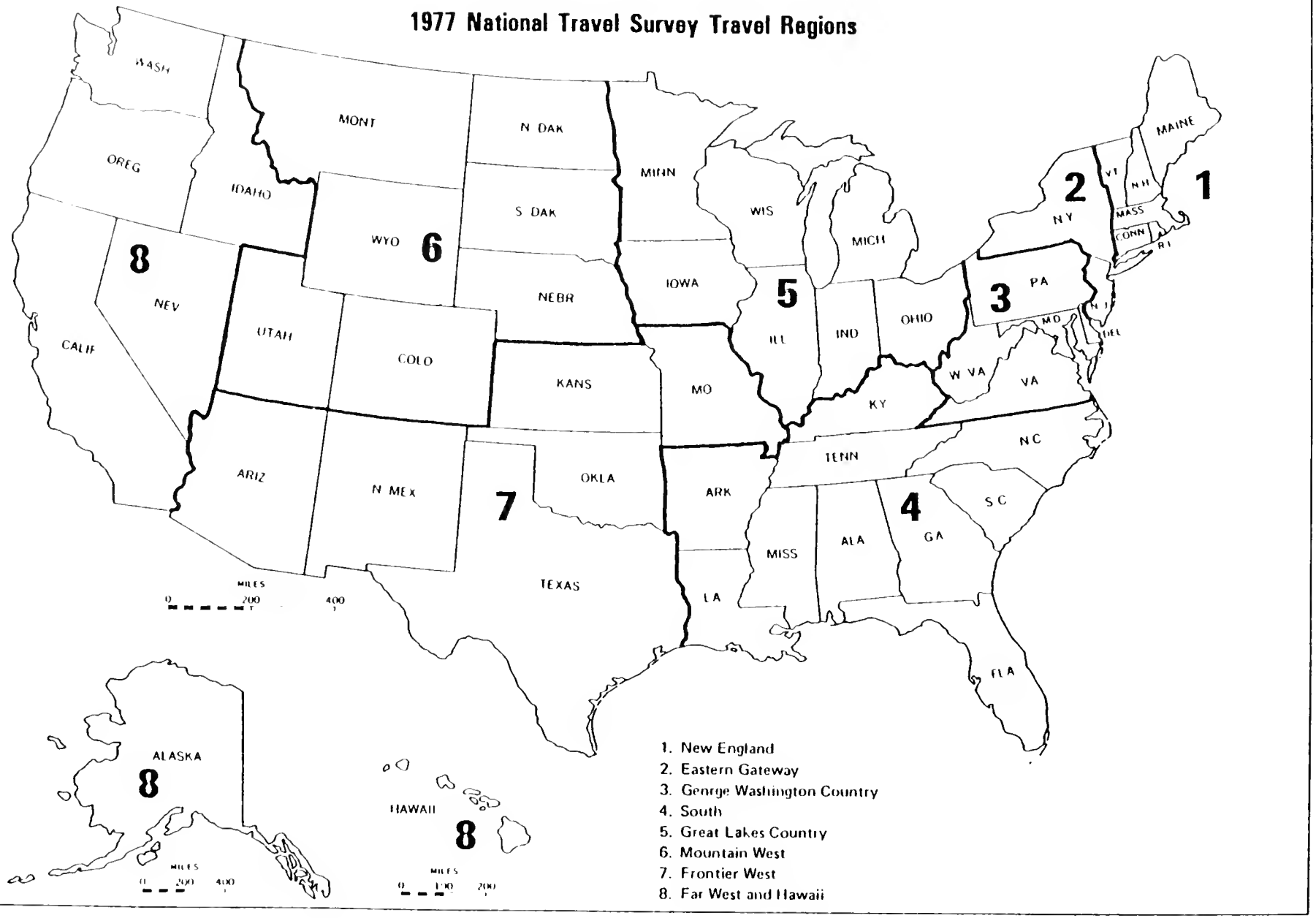
TABLE 5

PRINCIPAL ORIGIN STATES BY SEASON
ALL MODES

Rank	Season							
	Summer		Fall		Winter		Spring	
1	Washington	(14.6%)	Washington	(18.6%)	Washington	(19.0%)	Washington	(17.6%)
2	California	(9.8%)	Idaho	(9.9%)	Wyoming	(13.4%)	N. Dakota	(9.1%)
3	Idaho	(6.8%)	California	(7.7%)	Colorado	(7.4%)	Idaho	(8.1%)
4	Wyoming	(6.2%)	Wyoming	(6.4%)	Minnesota	(7.2%)	Wyoming	(7.9%)
5	Minnesota	(6.1%)	N. Dakota	(5.8%)	California	(6.8%)	California	(6.7%)

Source: Oblinger-McCaleb, Architects, Engineers, and Planners.

Map 2


1977 National Travel Survey Travel Regions
WASH
OREG
CALIF
IDAHO
NEV
MONT
WYO
6
N DAK
S DAK
NEBR
UTAH
COLO
ARIZ
N MEX
8
7
KANS
OKLA
TEXAS
MINN
IOWA
MO
ARK
LA
WIS
ILL
5
MICH
IND
OHIO
KY
TENN
MISS
ALA
GA
4
FLA
S C
N C
W VA
VA
PA
3
N Y
2
MD
DEL
N J
MAINE
VT
N H
MASS
CONN
R I
1
MILES
0 200 400
ALASKA
8
HAWAII
8
MILES
0 100 200
1. New England
2. Eastern Gateway
3. Genrge Washington Country
4. South
5. Great Lakes Country
6. Mountain West
7. Frontier West
8. Far West and Hawaii

Trip Destination

Destinations of travellers also exhibited a significant pattern throughout the year. In the fall and winter seasons, a majority of the non-resident travellers surveyed indicated Montana as their destination. Slightly under half of the respondents noted Montana as their destination in the spring and summer seasons. Washington and Wyoming were the next highest destination states for all seasons. Destination states and the percent of responses by season are shown in Table 6.

TABLE 6

PRINCIPAL DESTINATION STATES
ALL MODES

Rank	Season							
	Summer		Fall		Winter		Spring	
1	Montana	(44.5%)	Montana	(54.0%)	Montana	(75.4%)	Montana	(48.6%)
2	Washington	(10.6%)	Washington	(11.0%)	Washington	(4.7%)	Washington	(11.4%)
3	Wyoming	(6.7%)	Wyoming	(6.1%)	Wyoming	(3.1%)	Wyoming	(5.9%)
4	Alberta, Canada	(4.5%)	Alberta, Canada	(4.2%)	Colorado	(2.3%)	N. Dakota	(4.3%)
5	Idaho	(3.8%)	California	(3.1%)	N. Dakota, Oregon	(1.6%)	Idaho	(4.3%)

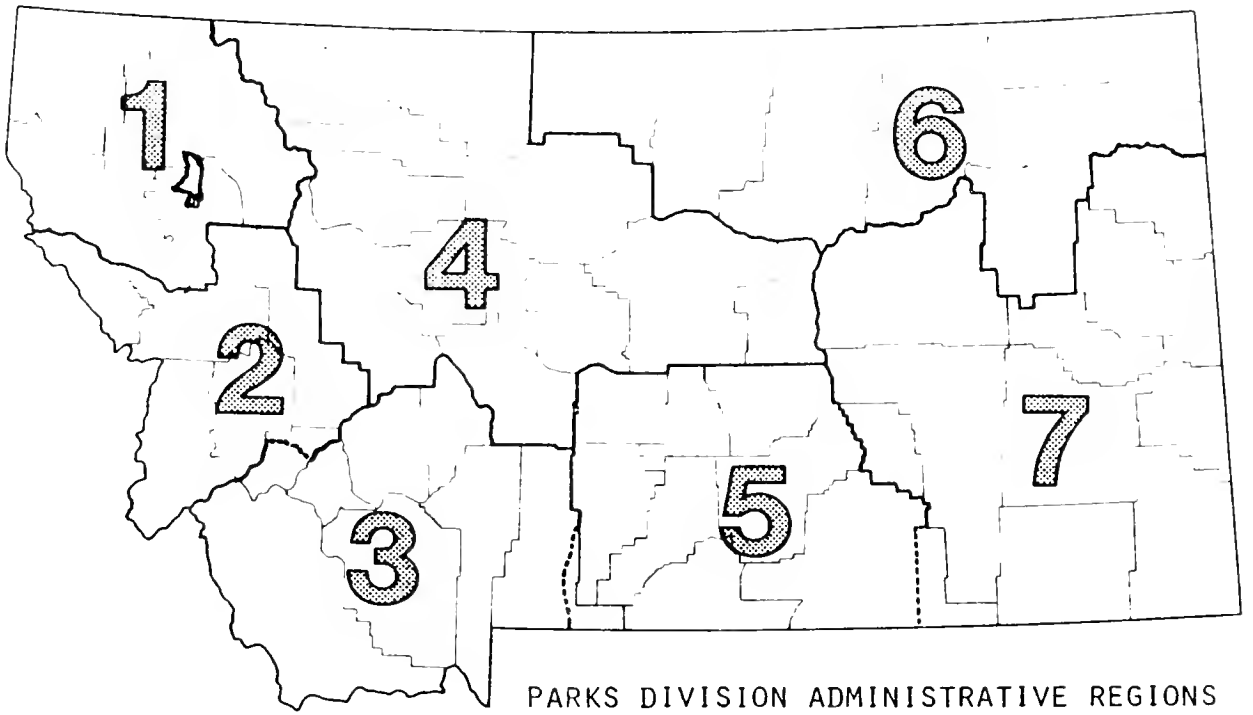
Source: Oblinger-McCaleb, Architects, Engineers, and Planners.

As might be expected, the destinations of travellers within Montana were principally the western portion of the State. A majority of respondents indicated planning regions 3, 4, and 5 as their destinations throughout the year. These regions are illustrated on Map 3. In the spring and summer seasons, regions 3, 4, and 5 in that order were the principal destination areas. These three regions accounted for 66 and 71 percent of the destinations within the State for the spring and summer seasons, respectively. Regions 5, 3, and 4 in that order were the principal destinations in the State during the fall and winter seasons. Slightly over two-thirds of the respondents were destined for these regions in the fall and winter seasons.

Trip Purpose

Purposes of non-resident trips to the State fluctuated throughout the year. Table 7 summarizes trip purpose for all modes by season.

Regional Boundaries and Offices



PARKS DIVISION ADMINISTRATIVE REGIONS

STATE HEADQUARTERS

Helena
1420 East Sixth Ave.
449-3750

REGIONAL OFFICES

Region 1
490 North Meridian Road
Kalispell
755-5505

Region 2
3309 Brooks
Missoula
721-5808

Region 3
8695 Huffine Lane
Bozeman
586-5419

Region 4
Route 4, Box 243
Great Falls
454-3441

Region 5
1125 Lake Elmo Drive
Billings
252-4654

Region 6
Route 1, Box 210
Glasgow
228-9347

Region 7
Box 430
Miles City
232-4365

Map 3

TABLE 7

TRIP PURPOSE
ALL MODES

Percent of Total Response

Trip Purpose	Summer	Fall	Winter	Spring
Vacation or Recreation	37.5%	25.4%	17.8%	16.6%
Visiting Friends or Relatives	22.9%	25.3%	15.7%	22.5%
Business	12.7%	21.5%	46.7%	22.7%
Convention	0.9%	0.8%	0.0%	0.7%
Just Passing Through	25.9%	27.1%	19.9%	37.4%
	59	46	25	42

Source: Oblinger-McCaleb, Architects, Engineers, and Planners.

As shown in Table 7, nearly 40 percent of non-resident travellers were vacationing in the State during the summer. Nearly half (48.8 percent) of the respondents indicated they were passing through and visiting. Approximately equal percentages, or a combined percentage of 77.8 percent, of the respondents indicated they were just passing through and in Montana for vacationing and visiting during the fall season. Trip purposes during the winter changed significantly. Roughly half of the respondents indicated they were in the State on business. Passing through and vacationing were the next most indicated responses. During the spring, over one-third of the respondents indicated they were passing through. Nearly half of the respondents revealed they were in Montana on business and to visit.

One would expect the percentage of travellers with destinations other than Montana in Table 6 to be comparable to the "Just Passing Through" percentage in Table 7. Two explanations for this discrepancy seem apparent. The percentages in Tables 6 and 7 are based on the total number of responses to the particular question and respondents could indicate more than one answer to question 7. The total number of responses to items in Table 7 total more than the actual number of returned surveys. The percentages in Table 7 are based on the total number of boxes checked on question 7 of the survey. With multiple responses possible, many respondents may have been visiting or on vacation while passing through Montana. If the percent of responses during the summer to "Just Passing Through" was calculated based on the number of surveys returned, the response rate for "Just Passing Through" would be 33.4 percent.

Another explanation might be inappropriate answers to trip purpose <u>while in Montana</u>. Survey crews stressed that the questions were to be answered <u>only</u> while in Montana. Some travellers possibly responded to question 7 with the overall purpose of their trip and not specifically why they were in Montana. Those taking vacations in Canada, for example, may have checked "Vacation" rather than "Just Passing Through" when in Montana.

Travel Party Size

Table 8 indicates average travel party size by mode and by season.

TABLE 8

AVERAGE NUMBER IN TRAVEL PARTY
ALL MODES BY SEASON

Mode	Season			
	Summer	Fall	Winter	Spring
Automobile	2.86	2.19	2.25	2.10
Air	1.46	1.42	1.17	1.30
Bus	1.49	1.39	1.17	1.34
All Modes Combined	2.61	2.01	1.50	1.95

Source: Oblinger-McCaleb, Architects, Engineers, and Planners.

As might be expected, the largest average travel party sizes occurred during the summer months for all modes. Travel parties were largest for automobile travellers throughout the year, averaging nearly three persons per party during the summer and just over two persons the remainder of the year. Air and bus travel parties were approximately equal in size throughout the year.

Length of Stay

The average number of days and nights spent in the State is illustrated in Table 9 for each mode and each season. The average length of stay was highest for air passengers during the summer and spring seasons and the highest for bus passengers during the fall and winter seasons. Length of stay for automobile passengers was the lowest of all modes throughout the year. Length of stay was longest for automobile and air passengers during the summer, but the longest stay for bus passengers was recorded during the winter.

In examining the statistics for bus passengers during the fall and winter, one would expect the number of days and nights spent in the State logically should not differ by more than one. These averages were calculated based on the sum of all days (and nights) recorded by respondents divided by the number of respondents. In many instances, respondents recorded only days or only nights. When this occurred, no assumptions were made about the space left blank. For example, if somone filled in only 4 days, he could have spent either 3 or 5 nights in the State. Assuming either was unjustified and amounted to altering the data. In the case of fall bus respondents, 76 respondents cummulatively spent 458 days in the State. Half of the respondents (38) indicated they spent a sum of 393 nights in the State.

Although the sums are roughly comparable, the different number of respondents results in the seemingly incompatible averages.

It should be noted that attempt was made to eliminate the surveys which seemed obviously falsified such as one which said 10 days and zero nights. The 10 days was utilized but the zero was counted as a non-response because it made no sense.

TABLE 9

AVERAGE LENGTH OF STAY
ALL MODES BY SEASON

Mode	Season			
	Summer	Fall	Winter	Spring
Automobile				
Days	4.5	3.9	3.4	3.5
Nights	4.3	3.6	3.3	3.3
Air				
Days	7.3	4.9	6.6	5.1
Nights	7.0	4.9	6.3	5.0
Bus				
Days	5.5	6.0	13.1	4.2
Nights	5.7	10.3	16.3	5.5

Source: Oblinger-McCaleb, Architects, Engineers, and Planners.

Age of Travellers

Table 10 summarizes age of travellers by season for all modes. The numbers in the table refer to the percentage of respondents in that age group for that particular season.

TABLE 10

PERCENT TRAVELLERS IN AGE GROUP
ALL MODES

Age Group	Season			
	Summer	Fall	Winter	Spring
Under 18	25.6%	10.3%	3.4%	11.3%
18-24	12.6%	12.8%	15.8%	18.2%
25-34	16.5%	17.5%	27.9%	22.2%
35-44	14.2%	13.1%	20.1%	11.8%
45-54	12.9%	14.8%	12.9%	13.2%
55-64	11.4%	19.4%	10.6%	14.7%
65 and Older	6.7%	12.2%	4.3%	8.5%

Source: Oblinger-McCaleb, Architects, Engineers, and Planners.

The statistics show that the highest percentage of travellers during the summer were under 18 years of age. This was most likely due to families with children taking vacations in the State (Refer to Table 7, Trip Purpose). The fall season exhibited a fairly even age distribution of travellers entering the State with the 55 to 64 age group recording the highest percentage. During the winter and spring seasons, the highest percentages were recorded for the 25 to 34 age group.

Income of Travellers

The percent of travellers in each income bracket for each season is shown in Table 11 for both families and individuals. "Family income" refers to the income of a group of related individuals travelling together. The common connotation of the work family is used. If a married individual is travelling alone that person's income is reported as "family income". "Individual income" refers only to the income of an unmarried individual travelling either alone or with company. In instances where more than one individual or family was travelling together, only one individual or family was requested to fill out the questionnaire.

TABLE 11

PERCENT TRAVELERS IN INCOME BRACKET
ALL MODES

Income Bracket	Summer	Fall	Winter	Spring
		Family Income		
Under $ 6,000	5.2%	10.7%	9.7%	6.9%
6,000 - 9,999	10.2%	10.0%	6.2%	8.3%
10,000 -14,999	14.6%	14.6%	11.3%	19.0%
15,000 -24,999	32.7%	29.9%	27.4%	32.2%
25,000 -49,999	29.8%	28.5%	35.5%	25.7%
50,000 and Over	7.5%	6.3%	9.7%	7.8%
		Individual Income		
Under $ 6,000	26.4%	19.8%	19.6%	18.1%
6,000 - 9,999	15.4%	13.2%	8.9%	17.3%
10,000 -14,999	13.9%	20.9%	12.5%	17.3%
15,000 - 24,999	25.8%	23.1%	14.3%	20.5%
25,000 -49,999	13.6%	13.2%	37.5%	22.0%
50,000 and Over	4.7%	9.9%	7.1%	4.7%

Source: Oblinger-McCaleb, Architects, Engineers, and Planners.

The percentages in the Table for family income reveal a significant pettern throughout the year. Over half of the respondents indicated their income was in the $15,000 to $24,999 and $25,000 to $49,999 income brackets. Nearly

two-thirds (over two-thirds for the summer and fall seasons) of the respondents indicated their income was $15,000 and over for all seasons.

The percentages for individual income show a different distribution. The highest percentage in the summer season was recorded for the under $6,000 income bracket. This income bracket recorded the third highest response rate in the fall and spring season and second highest during the winter season. In general, higher percentages in the lower income brackets were recorded for individuals compared to families in all seasons.

Expenditures

Average daily expenditures by mode for all seasons are summarized in Table 12.

Expenditures by auto travellers recorded the highest averages of all modes for all seasons. Expenditures for gasoline, eating and drinking, and hotel accomodations in that order were the three highest expenditures in the summer, fall, and spring seasons. Combined, these expenditure items accounted for over three-fourths of the average total amount expended by automobile travellers in each of the seasons. These items recorded high averages during the winter also, but the major expenditure item was other. Many survey respondents reported that they went shopping and bought gifts. This high average in the other category is probably related to gift shopping during the holiday season.

Average expenditures for air and bus travellers show the same pattern of higher totals during the summer and lower during the fall. Hotel and eating and drinking expenditures were the two items for air travellers recording the highest averages in all seasons. For bus travellers, eating and drinking expenditures recorded the highest averages for all seasons; the second highest average expenditure item was hotel accommodations for all seasons.

Price and Availability of Gasoline

The survey questionnaire included questions which asked travellers how the current price and availability of gasoline affected their trip and how the future price and availability might affect future trips. Table 13 shows the percent of responses to the questions dealing with existing conditions.

Over two-thirds of the respondents indicated the price and availability of gasoline during the survey period had no influence on their trip. The percent of respondents who indicated no influence increased to over 84 percent for the winter season. Travellers' incomes likely were factors which determined whether the price of gasoline affected a trip. During the winter season, the highest response rates were recorded in the $15,000 to $24,999 income brackets (refer to Table 11, Traveller Income). For those persons who indicated the price of gasoline had an influence on their trip, more people indicated they made fewer side trips during the summer, fall, and spring seasons and changed their mode of travel in the winter season.

TABLE 12

AVERAGE DAILY EXPENDITURES

Mode 1 Expenditure Item	Season Summer	Fall	Winter	Spring
Automobile				
Hotel	$13.16	$14.17	$ 20.20	$13.14
Campground	1.75	1.17	.00	.61
Eating and Drinking	14.41	15.59	24.38	15.67
Grocery	4.96	2.90	1.86	2.88
Sporting Goods	1.23	.48	4.57	.57
Gas and Auto Repair	21.82	19.90	18.17	24.25
Amusement and Recreation	2.76	2.10	12.20	4.84
Other	6.27	4.05	30.31	5.18
Total	$66.36	$60.36	$111.77	$67.74
Air				
Hotel	$20.59	$20.73	$ 22.31	$18.39
Campground	.28	.12	.01	.00
Eating and Drinking	18.14	17.30	19.75	15.58
Grocery	1.71	.97	.41	1.29
Sporting Goods	1.61	.25	.31	.16
Gas and Auto Repair	9.21	4.23	3.39	2.99
Amusement and Recreation	3.38	4.01	1.22	2.80
Other	4.49	2.50	3.90	4.81
Total	$59.41	$50.11	$ 51.30	$46.02
Bus				
Hotel	$ 5.50	$ 2.32	$ 2.94	$ 7.55
Campground	.50	.00	.00	.10
Eating and Drinking	7.96	4.77	7.30	9.18
Grocery	1.55	.29	.18	.40
Sporting Goods	.41	.12	.76	1.00
Gas and Auto Repair	2.17	1.04	1.34	1.13
Amusement and Recreation	1.43	.93	2.02	1.43
Other	6.49	2.73	.94	1.70
Total	$26.01	$12.20	$ 15.48	$22.49

Source: Oblinger-McCaleb, Architects, Engineers, and Planners.

TABLE 13

PERCENT[1] RESPONSE TO GASOLINE QUESTIONS
EXISTING CONDITIONS

	Season			
	Summer	Fall	Winter	Spring
Present Price[2]				
No Influence	69.2	73.1	85.6	73.9
Shorter Trip	8.6	7.0	1.8	5.7
Longer Stays	4.4	3.4	1.0	4.4
Fewer Side Trips	12.8	8.9	3.0	11.1
Cancelled Trips	5.2	3.9	1.5	4.0
Mode Change	6.1	6.5	5.8	4.2
Present Availability				
No Influence	70.2	74.4	84.3	74.5
Shorter Trip	5.9	3.1	0.8	1.8
Longer Stays	4.1	2.4	1.8	1.0
Fewer Side Trips	8.1	4.3	1.5	2.9
Cancelled Trips	4.3	3.1	1.0	1.2
Mode Change	4.5	4.6	4.5	1.8

[1]Percentages for each season will not total 100 percent since respondents could check more than one answer.

[2]The "present price of gasoline" steadily increased during the surveying period.

Source: Oblinger-McCaleb, Architects, Engineers, and Planners.

This response pattern was the same with respect to the availability of gasoline.

Table 14 shows the responses to future gasoline conditions. The responses to these questions differ significantly from the responses to the existing conditions questions. During the summer season, approximately two-thirds to three-fourths of the respondents indicated higher gasoline prices would affect future trips. Approximately one-third of these respondents indicated they would travel closer to home if gasoline prices continued to rise. Approximately 50 to 60 percent of the respondents during the fall and spring seasons indicated higher gasoline prices would influence future trips. Approximately 20 percent of the respondents in both seasons indicated they would travel closer to home. As with the questions dealing with current conditions, fewer winter respondents indicated higher prices would affect future trips.

Uncertainties surrounding future availability of gasoline if rationing were implemented might have a more significant impact on travel. Approximately two-thirds of the respondents during the fall and spring and over 80 percent in the summer indicated gasoline rationing would affect future trips. Sixteen to 39 percent of the summer, fall, and spring respondents who indicated an influence noted they would travel closer to home.

Estimated Non-Resident Travellers

The total number of non-resident travellers to the State was estimated utilizing data collected during the survey and other data sources. The estimate of total non-resident travellers involved two steps.

The first step estimated the total number of automobile travellers, excluding commercial vehicles, entering the State utilizing traffic count data for the survey period supplied by the State Highway Department. Traffic count data represented the most complete and detailed information available on non-resident travel compared to other modes of travel. Average daily traffic count data was obtained by season for each survey location as shown in Table 15. Foreign (non-resident) inbound counts were obtained or estimated for each survey location. At some survey locations, accurate foreign counts were not available. Estimates for these locations were made from discussions with highway department officials concerning trends in traffic since last counts were made and foreign traffic percentages. The "Annual Percent Foreign" column refers to the average percentage of foreign vehicles passing the survey location during the course of the study. The percentages fluctuated throughout the year and seasonal percentages are not shown due to limited space. In some instances counts from adjacent states were used when available and estimated foreign percentages applied. The foreign inbound counts were then summed by season. These figures are shown in Table 15.

Since the survey locations did not cover each highway entering the State, they represented a certain percentage of total foreign inbound traffic entering the State. These percentages were calculated during the survey design and are shown on line 2 of Table 16. Knowing this percentage, the total number of non-resident travellers entering the state during each season was obtained by using the following formula:

TABLE 14

PERCENT[1] RESPONSE TO GASOLINE QUESTIONS
FUTURE CONDITIONS

	Season			
	Summer	Fall	Winter	Spring
Gas at $1.25/gallon[2]				
No Influence	33.8	47.3	75.5	51.6
Shorter Trip	14.9	10.3	2.8	13.1
Longer Stays	8.6	6.0	1.5	8.1
Fewer Side Trips	15.9	8.6	3.0	12.8
Cancelled Trips	12.5	7.2	3.5	11.4
Mode Change	13.0	11.8	6.8	8.2
Travel Closer to Home	30.5	20.4	5.8	21.7
Gas at $1.50/gallon[2]				
No Influence	26.8	41.6	62.4	45.0
Shorter Trip	14.5	8.7	3.3	12.6
Longer Stays	8.0	6.3	4.5	8.1
Fewer Side Trips	15.1	8.9	4.0	13.6
Cancelled Trips	14.3	8.4	7.3	12.9
Mode Change	14.8	14.2	12.4	11.8
Travel Closer to Home	33.0	23.0	10.1	23.0
Gas Rationing				
No Influence	20.5	34.8	53.8	35.3
Shorter Trip	13.9	6.3	3.3	11.1
Longer Stays	8.4	5.5	4.3	9.4
Fewer Side Trips	13.4	8.9	5.8	12.3
Cancelled Trips	18.1	9.3	8.6	15.1
Mode Change	19.3	22.1	14.9	19.2
Travel Closer to Home	39.0	26.4	16.4	29.7

[1]Percentages for each season will not total 100 percent since respondents could check more than one answer.

[2]Due to continuous inflation during the surveying period, these figures were changed to $1.50 and $1.75, respectively, for the spring season.

Source: Oblinger-McCaleb, Architects, Engineers, and Planners.

TABLE 15

ESTIMATED NON-RESIDENT INBOUND ADT[1] BY SEASON
AT RANDOMLY SELECTED STATE BORDER CROSSINGS
MONTANA

Survey Locations	1979-80 AADT	Annual Percent Foreign	Annual Foreign ADT	1979 Summer ADT	Summer Foreign ADT	1979 Fall ADT	Fall Foreign ADT	1979-80 Winter ADT	Winter Foreign ADT	1980 Spring ADT	Spring Foreign ADT
*I-15 North of Shelby	2,657	11.0	292	3,309	431	2,807	365	2,113	153	2,399	218
*I-15 South of Dillon	579	26.8	155	760	153	627	126	415	166	515	175
*U.S. 191 South of Bozeman	736	25.8	190	1,494	418	674	189	308	69	468	85
M. 87 West of Yellowstone Park	110	38.2	42	199	76	99	38	59	22	82	31
U.S. 93 North of Eureka	175	8.0	14	229	18	182	15	130	10	159	13
*U.S. 89 North of Gardiner	408	18.1	74	753	170	397	89	195	9	288	28
*I-94 East of Glendive	1,031	18.7	193	1,418	291	1,027	211	730	105	947	166
*I-90 West of St. Regis	1,835	23.9	438	2,246	553	1,754	432	1,287	281	2,053	485
I-90/U.S. 87 North of Sheridan, Wyoming	1,015	20.0	203	1,575	315	996	199	596	119	894	179
U.S. 212 South of Billings	536	36.8	197	972	357	483	177	291	107	397	146
Total	9,082		1,798	12,955	2,782	9,046	1,841	6,124	1,041	8,202	1,526

[1] ADT refers to "Average Daily Traffic" which is an average 24-hour count of the number of vehicles passing a specified point. ADT's here are one-way counts.

* Counts obtained from automatic counter data supplied by the State Highway Department. Other location counts estimated.

Source: State of Montana, Department of Highways - 1980.

TABLE 16

ESTIMATED NON-RESIDENT INBOUND VEHICLES AND PASSENGERS MONTANA

	Summer	Fall	Winter	Spring
Total Non-Resident ADT of roads selected to be surveyed:	2,782	1,841	1,041	1,526
Percent of State Total of roads surveyed:	72.6%	72.6%	72.6%	72.6%
Total Non-Resident ADT of State Highways:	3,832	2,536	1,434	2,102
Number of Days in Season:	92	91	91	92
Estimated number of Non-resident Vehicles that entered the State:	352,544	230,776	130,492	193,384
Average Number of Persons Per Vehicle:	2.86	2.19	2.25	2.10
Estimated number of Non-Resident Travelers:	1,008,276	505,399	293,607	406,106

TOTAL NON-RESIDENT AUTOMOBILE TRAVELERS FOR YEAR: 2,213,388

Source: Oblinger-McCaleb, Architects, Engineers, and Planners - 1980.

$$\frac{\text{Total Foreign ADT at Survey Locations}}{\text{Percent Survey Location total was to total ADT entering State}} \times \text{Number of days in season} \times \text{Average number of persons per vehicle}$$

This calculation arrived at the estimated total number of non-resident automobile travellers entering the State during each season as shown in Table 16.

This estimated number of automobile travellers was used as a basis for the second step in determining all travellers by mode. From the Travel During 1977, National Travel Survey the percentages that each mode constituted of the total sample during that survey were calculated. Given the number of automobile travellers arrived at in step one and the percent they constituted of the total number of travellers, the number of automobile travellers was divided by this percentage to arrive at the total number of travellers. Knowing the total number of travellers, the appropriate percentages shown in Table 17 were applied to the total to determine the number of non-resident travellers by mode. The "Other" category includes individuals who travelled by train, motorcycle, other modes, or different modes entering and leaving the State.

As would be expected, the number of non-resident travellers during the summer was highest of all four seasons. Of the 2,459,321 non-resident travellers entering Montana during the survey period, nearly half came during the summer months.

Estimated Non-Resident Expenditures

Utilizing average daily travel party expenditure information from Table 12 and the estimated number of travellers by mode by season, total non-resident traveller expenditures in the State were estimated. These estimates were made by mode by season using the following formula:

$$\frac{\text{Total Estimated Travellers}}{\text{Average Travel Party Size}} \times \text{Average Length of Stay} \times \text{Average Daily Expenditure}$$

The formula was applied to each mode of travel using the figures in Table 18 (Estimated Non-Resident Travellers by Mode), Table 8 (Average Number in Travel Party), Table 9 (Average Length of Stay), and Table 12 (Average Daily Expenditure). Total non-resident traveller expenditures by expenditure category is summarized in Table 18. The figures in the table are the sum of expenditures by automobile, air, bus, and other travellers. Since no statistics were compiled for other travellers, the averages for all modes combined were used in estimating expenditures for this group of travellers. This assumes that expenditures for this group were between bus and automobile travellers in most cases.

Expenditures by non-resident travellers in the State were estimated to total approximately $251,957,000 during the survey period. Nearly half of this total was expended by summer travellers. Major expenditure items throughout the year included gasoline and auto repair, eating and drinking, and hotel accommodations. For each season except winter, these were the three

TABLE 17

ESTIMATED NON-RESIDENT TRAVELERS BY MODE
MONTANA

Mode of Travel		Summer	Fall	Winter	Spring	Annual
Auto	(90.0%)	1,008,276	505,399	293,607	406,106	2,213,388
Air	(4.8%)	53,775	26,955	15,659	21,659	118,048
Bus	(3.1%)	34,730	17,408	10,113	13,988	76,239
Other	(2.1%)	23,526	11,793	6,851	9,476	51,646
	Total	1,120,307	561,555	326,230	451,229	2,459,321

TOTAL NON-RESIDENT TRAVELERS FOR YEAR: 2,459,321

Source: Travel During 1977, National Travel Survey, U.S. Department of Commerce - 1977, and Oblinger-McCaleb, Architects, Engineers, and Planners - 1980.

TABLE 18

ESTIMATED NON-RESIDENT TRAVELER EXPENDITURES BY SEASON
MONTANA

Expenditure Category	Summer	Fall	Winter	Spring	Annual
Hotel/Motel	$ 25,265,589	$ 8,093,158	$11,360,285	$10,511,378	$ 55,230,410
Campground	2,712,331	576,640	1,054	396,461	3,686,486
Eating and Drinking	26,761,448	8,711,483	13,411,335	11,603,737	60,488,003
Grocery	7,920,605	1,475,685	877,317	1,958,598	12,232,205
Sporting Goods	2,262,500	252,194	2,122,175	410,591	5,047,460
Gasoline/Auto Repair	34,758,972	9,966,563	8,443,365	15,788,085	68,956,975
Amusement/Recreation	5,097,799	1,272,594	5,694,229	3,372,884	15,437,506
Gifts, Film, and Other	11,133,727	2,222,259	13,772,809	3,749,413	30,878,208
	$115,912,971	$32,570,576	$55,682,569	$47,791,147	$251,957,253
			TOTAL NON-RESIDENT TRAVELER EXPENDITURES FOR YEAR:		$251,957,253

Source: Oblinger-McCaleb, Architects, Engineers, and Planners - 1980.

highest expenditure items in that order. Eating and drinking was the highest expenditure item during the winter. Expenditures for amusement and recreation during the winter exceeded the total for the summer. This is probably due to the winter sports recreation opportunities (particularly skiing) available in the State.

Estimated Non-Resident Recreation Participation

Recreational activity days for the survey period are summarized in Table 19. Thirty-four categories of recreational activity in which non-residents involved themselves are listed by season and annual totals are given . The survey period was June 1, 1979 through May 31, 1980.

During the course of the study, seasonal summaries of the sampled non-residents recreational use was reported by each activity for each of the Old West State's planning regions. By utilizing the total non-resident travel estimates previously discussed in this report (Table 17), the seasonal sample cases were expanded to represent the total non-resident seasonal usage. This was done by the following equation[1].

$$\frac{\text{Sampled activity days}^{2}}{\text{Number parties}^{3} \times \text{Number people/party}^{4}} \times \text{Total number of non-resident travellers}^{5} = \text{Total non-resident activity days by season}$$

Summing the seasonal estimates, of course, provides the annual estimates.

For Montana the annual non-resident recreational usage is 5,926,090 activity days. Of this amount nearly 24 percent is attributed to visiting special attractions, visiting historical sites, and attending special events.

Peak loading, as expected, occurs during the summer season. Just under 70 percent of the total annual non-resident recreation use occurred from June 1

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[1] This expansion method is one of two methods developed by the Consultant. A slightly different approach, and one which requires much more exhaustive calculations, can be found in Appendix C of this report. As used in the 1980 Wyoming SCORP, the SCORP methodology attributes all activity days to those who classified the main purpose of their trip as being to vacation and/or participate in recreational activities. Since the average party size for these groups was larger than the average party size for all non-resident groups, and since this number appears in the denominator of the above equation, the result was to obtain a slightly smaller (6%) number of activity days than under the methodology used here.

[2] For all sampled non-residents during any given season.

[3] The number of sampled non-residents for each season in Montana were as follows: summer - 1,939, fall - 583, winter - 396, and spring - 595.

[4] From Table 8, All Modes Combined.

[5] From Table 17.

to August 31, 1979. During this period visiting special attractions and public campground camping were the two most popular activities with each representing 11 percent of the summer's total non-resident activity days.

Also as shown in Table 19, downhill skiing accounted for one fourth of winter's total non-resident activity days.

It should be noted that some of the activity days estimates in Table 19 appear out of place. All data from the activity logs was recorded as reported by respondents. An attempt to eliminate any surveys which were obviously absurd was made, but some appeared otherwise legitimate. Using the methodology outlined above, the 5 person days recorded in the sample for power boating in the winter (see Section IV - Recreation Participation in winter statistical summary) would represent a significant number of activity days when expanded to represent all non-resident travellers. Likewise, if the survey sample did not include anyone who swam in a public pool in the fall, expansion to all non-resident travellers would show zero activity days.

TABLE 19

NON-RESIDENT ACTIVITY DAYS

Recreation Activity	Season				
	Summer	Fall	Winter	Spring	Total
01 Primitive Campground	273,167	67,603	4,953	19,515	365,138
02 Public Campground	440,299	61,370	11,006	19,027	531,702
03 Private Campground	273,388	56,575	2,201	19,415	351,579
04 Special Camp	93,860	8,630	2,201	6,990	111,681
05 Picnicking: Highway Reststops	141,896	23,014	550	10,096	175,556
06 Picnicking: Area with Tables	279,587	33,082	4,953	24,463	342,085
07 Picnicking: Area without Tables	129,057	24,931	0	7,378	161,366
08 Day Hiking	348,210	85,822	10,456	15,144	459,632
09 Backpacking	83,455	6,233	1,101	3,495	94,284
10 Jogging	52,907	10,068	54,481	7,378	124,834
11 Horseback Riding	105,813	59,931	0	1,165	166,909
12 Fishing: Stream/River	199,230	91,096	3,852	9,708	303,886
13 Fishing: Lakeshore	67,517	9,110	2,201	2,330	81,158
14 Fishing: Lake, from boat	49,143	25,890	33,019	3,106	111,158
15 Ice Fishing	0	0	0	0	0
16 Hunting	3,763	73,835	2,752	3,495	83,845
17 Off Highway Vehicle Use: Motorcycle	12,175	959	2,201	0	15,335
18 Off Highway Vehicle Use: Other	79,249	14,863	53,380	3,883	151,375
19 Snowmobiling	0	0	8,255	0	8.255

Table 19 Continued

Recreation Activity	Summer	Fall	Winter	Spring	Total
20 Golf	25,457	10,068	0	0	35,525
21 Tennis	33,205	7,192	550	0	40,947
22 Swimming: Public Pool	54,014	0	1,651	2,718	58,383
23 Swimming: Private Pool	163,369	45,068	7,704	9,708	225,849
24 Swimming: Other	174,880	15,342	550	6,990	197,762
25 Power Boating	58,662	6,712	2,752	0	68,126
26 Waterskiing	31,877	7,671	0	0	39,548
27 Sailing	6,862	3,356	0	777	10,995
28 Canoe/in river	44,495	9,589	0	0	54,084
29 Canoe/in lake	18,595	0	0	0	18,595
30 Downhill Skiing	0	1,918	86,949	21,745	110,612
31 Crosscountry Skiing	0	0	13,758	13,979	27,737
32 Visiting Special Attractions	447,161	105,959	15,959	73,779	642,858
33 Visiting Historical Sites	287,113	98,767	6,053	41,161	433,094
34 Attending Events	136,583	159,657	14,308	11,649	322,197
TOTAL	4, 114,989	1,124,311	347,796	338,994	5,926,090

Source: Oblinger-McCaleb, Architects, Engineers, and Planners, 1980.

Appendices

APPENDIX A

STATE, SURVEY LOCATION, AND VEHICLE CODES

State Codes

01	Montana	32	New Hampshire
02	Wyoming	33	New Jersey
03	North Dakota	34	New Mexico
04	South Dakota	35	New York
05	Nebraska	36	North Carolina
06	Alabama	37	Ohio
07	Alaska	38	Oklahoma
08	Arizona	39	Oregon
09	Arkansas	40	Pennsylvania
10	California	41	Rhode Island
11	Colorado	42	South Carolina
12	Connecticut	43	Tennessee
13	Deleware	44	Texas
14	Florida	45	Utah
15	Georgia	46	Vermont
16	Hawaii	47	Virginia
17	Idaho	48	Washington
18	Illinois	49	West Virginia
19	Indiana	50	Wisconsin
20	Iowa	51	Alberta
21	Kansas	52	British Columbia
22	Kentucky	53	Manitoba
23	Louisiana	54	New Brunswick
24	Maine	55	Newfoundland
25	Maryland	56	Nova Scotia
26	Massachusetts	57	Ontario
27	Michigan	58	Prince Edward Island
28	Minnesota	59	Quebec
29	Mississippi	60	Saskatchewan
30	Missouri	99	All Other
31	Nevada		

Survey Location Codes

01	Billings
02	Bozeman
03	Butte
04	Great Falls
05	Kalispell
06	Missoula
07	Whitefish
08	I-94 East
09	I-90 West
10	U.S. 93 North
11	I-15 North
12	U.S. 91 and I-15 South
13	M 87 South
14	U.S. 191 South
15	U.S. 89 South
16	U.S. 212 South
17	I-90 and U.S. 87 South

Vehicle Codes

01	Auto
02	Auto and Trailer
03	Auto and Boat
04	Auto and Camper
05	Pick-Up Camper
06	Pick-Up and Trailer
07	Pick-Up and Boat
08	PU-Camper and Camper
09	Camper Truck or RV
10	Other

APPENDIX B

SECOND FILE (RECREATION PARTICIPATION)
COMPUTER PROGRAM

```
DATE-WRITTEN.    11/04/79.
DATE-COMPILED.   11/04/79.
REMARKS.
                 THIS PROGRAM READS THE DIARY RECORD FILE
                 AND PRINTS  A  REPORT  OF NO OF PERSONS
                 WITHIN ACTIVITY  WITHIN PLANNING REGION.
ENVIRONMENT DIVISION.
CONFIGURATION SECTION.
SPECIAL-NAMES.
    C01 IS TOP-OF-PAGE.
INPUT-OUTPUT SECTION.
FILE-CONTROL.
    SELECT  DIARY-FILE-IN   ASSIGN TO SYS011-UT-2400-S.
    SELECT  PRINT-FILE      ASSIGN TO SYS006-UR-1403-S.
    EJECT
DATA DIVISION.
FILE SECTION.
FD  DIARY-FILE-IN
    RECORDING MODE IS F
    LABEL RECORDS ARE OMITTED
    RECORD CONTAINS 19  CHARACTERS
    BLOCK  CONTAINS 300 RECORDS
    DATA  RECORD IS  DIARY-IN-RECORD.
01  DIARY-IN-RECORD.
    05  DIARY-KEY.
        07  DIARY-STATE          PIC X.
        07  DIARY-SERIAL-NO      PIC X(5).
    05  DIARY-PLANNING-REGION    PIC X.
    05  DIARY-COUNTY-CODE        PIC XX.
    05  DIARY-DATE.
        07  DIARY-MONTH          PIC XX.
        07  DIARY-DAY            PIC XX.
        07  DIARY-YEAR           PIC XX.
    05  DIARY-NO-OF-PERSONS-X.
        07  DIARY-NO-OF-PERSONS PIC S99.
    05  DIARY-ACTIVITY-NO        PIC XX.
    SKIP3
FD  PRINT-FILE
    RECORDING MODE IS F
    LABEL RECORDS ARE OMITTED
    RECORD CONTAINS 133 CHARACTERS
    DATA RECORD IS  PRINT-LINE.
01  PRINT-LINE.
    05  FILLER               PIC X.
    05  PRINT-DATA           PIC X(132).
    EJECT
WORKING-STORAGE SECTION.
```

```
01  WORK-LIT.
    05  FILLER              PIC X(50)    VALUE
    '********** WORKING STORAGE STARTS HERE  **********'.
01  TOTAL-COUNTS   COMP-3.
    05  TOT-ACTIVITY-NO     PIC S9(7)        VALUE +0.
    05  TOT-PLANNING-REGION PIC S9(7)        VALUE +0.
    05  TOT-STATE           PIC S9(7)        VALUE +0.
    05  LINE-COUNT          PIC S999         VALUE +0.
01  SAVE-AREAS.
    05  STATE-SAVE                PIC X.
    05  PLANNING-REGION-SAVE      PIC X.
    05  ACTIVITY-NO-SAVE          PIC XX.
01  HEADING-LINE.
    05  FILLER                PIC X(6)     VALUE  SPACES.
    05  FILLER                PIC X(47)    VALUE
    'OBLINGER - MCCALEB DIARY REPORT FOR STATE  '.
    05  STATE-P               PIC X.
    SKIP2
01  COLUMN-HEADING.
    05  FILLER                PIC X(6)     VALUE SPACES.
    05  FILLER                PIC X(46)    VALUE
    'PLANNING REGION    ACTIVITY NO     NO OF PERSONS'.
01  DETAIL-LINE.
    05  FILLER                PIC X(11).
    05  PLANNING-REGION-P     PIC XX.
    05  TITLE-P               PIC X(15).
    05  ACTIVITY-NO-P         PIC XX.
    05  FILLER                PIC X(9).
    05  NO-OF-PERSONS-P       PIC Z,ZZZ,ZZZ-.
    EJECT
PROCEDURE DIVISION.
INITIALIZE-ROUTINE.
    OPEN     INPUT   DIARY-FILE-IN
             OUTPUT  PRINT-FILE.
READ-PROCESS-FIRST-RECORD.
    READ DIARY-FILE-IN  AT END GO TO END-OF-INPUT.
    MOVE DIARY-STATE  TO  STATE-SAVE
                          STATE-P.
    MOVE SPACES  TO  DETAIL-LINE.
    MOVE DIARY-PLANNING-REGION  TO PLANNING-REGION-SAVE
                                   PLANNING-REGION-P.
    MOVE DIARY-ACTIVITY-NO  TO ACTIVITY-NO-SAVE.
    PERFORM HEADING-ROUTINE.
    GO  TO  ADD-FOR-REPORT.
READ-DIARY-FILE.
    READ DIARY-FILE-IN  AT END GO TO END-OF-INPUT.
    IF  DIARY-STATE  =  STATE-SAVE
        NEXT SENTENCE
    ELSE
        PERFORM STATE-BREAK THRU END-STATE-BREAK.
    IF  DIARY-PLANNING-REGION  =  PLANNING-REGION-SAVE
        NEXT SENTENCE
    ELSE
        PERFORM  PLANNING-REGION-BREAK THRU
            END-PLANNING-REGION-BREAK.
    IF  DIARY-ACTIVITY-NO  =  ACTIVITY-NO-SAVE
```

```
    WRITE PRINT-LINE  FROM HEADING-LINE AFTER ADVANCING
        TOP-OF-PAGE.
    WRITE PRINT-LINE  FROM COLUMN-HEADING AFTER ADVANCING
        2  LINES.
    MOVE SPACES TO  PRINT-LINE.
    WRITE PRINT-LINE  AFTER ADVANCING 1 LINES.
    MOVE ZEROES TO  LINE-COUNT.
    SKIP3
END-OF-INPUT.
    PERFORM STATE-BREAK THRU END-STATE-BREAK.
END-OF-JOB.
    CLOSE   DIARY-FILE-IN
            PRINT-FILE.
    STOP RUN.
```

APPENDIX C

WYOMING SCORP RECREATION PARTICIPATION METHODOLOGY

Introduction

The demand for recreation services and facilities consists of two parts, those services and facilities used by residents of the State and those used by non-residents. While both groups share many of the same desires for recreation, nevertheless, it is the combined affect of both groups, or the total demand, on the recreation resources of the State that recreation planners and officials are called upon to satisfy. The comparison between total demand and supply of recreation facilities, together with the establishment of appropriate standards in which to measure both, forms the basis of recreation planning and needs analysis.

Summer visitations at Wyoming's national parks during 1979, show a marked decrease from the levels obtained during 1978. Indicative of this decline was Yellowstone National Park which experienced a 33.5 percent decrease, (which translates into 654,336 people), (See Table E-1 for trends in Summer visitations at Wyoming's national parks). Whether or not this represents a one-year drop in response to the uncertainties surrounding fuel availibility during the Summer of 1979 or an indication of things to come, still remains unclear. This situation increases the pressures for accurate recreation planning and demand forecasting; especially when one considers the economic repercussions to states with highly significant tourist-based industries such as Wyoming. This Appendix, which addresses non-resident recreation demand and characteristics, must be read with the uncertainties regarding the future kept in mine. For as the myriad of social and economic variables which affect our lives change over time, one can and should expect that the nature of outdoor recreation demand will also change.

This assessment of non-resident demand is based primarily on the results of the Old West Regional Travel Study conducted in the State of Wyoming

TABLE E-1

TRENDS IN SUMMER RECREATION VISITATION
AT NATIONAL PARKS IN WYOMING

Name of Park	1979	% of Change	1978	% of Change	1977	% of Change	1976	% of Change	1975
Devils Tower	154,404	-25.6	207,700	95.5	106,226	7.5	114,803	5.4	108,963
Ft. Laramie	69,154	-20.4	86,839	1.4	85,612	3.8	82,509	11.5	73,983
F ssil Butte	9,158	-11.0	10,287	15.6	8,898	45.2	6,128	- 1.0	6,190
Grand Teton	1,660,857	-27.2	2,280,050	- 1.0	2,304,114	11.0	2,076,491	24.0	1,675,188
J.D.R. Parkway	967,925	-30.9	1,404,397	1.4	1,385,043	3.5	1,337,921	14.6	1,167,081
Yellowstone	1,301,741	-33.5	1,956,077	4.6	1,870,497	- .7	1,884,334	6.9	1,762,667
Totals	4,163,239	-30.0	5,945,350	3.2	5,760,390	4.7	5,502,186	14.8	4,794,072

Source: U.S. Department of the Interior, National Park Service, Visitation Statistics, for the years 1975 through 1979.

during the Summer of 1979.[1] While the results represent only three months of the year, for most recreation activities, the figures represent the peak demand period and are thus appropriate for recreation planning and resource allocation since they represent maximum pressure placed on recreation resources and facilities. The recreation activities which are typically non-summer, are estimated through the use of secondary data sources, since the survey results for these months are not available at this time.

The Old West Regional Travel Study was a multi-model, non-resident travel study. It consisted of personal interviews with and the distribution of mailback questionnaires to non-resident travelers in the State at randomly selected state highway border crossings, and at air, bus and railroad terminals. During the summer, eleven highway border crossings, five air terminals, four bus stations, and one railroad station were surveyed on a rotating basis. The distribution by mode was then divided into a seasonal distribution. Finally, the seasonal distribution was divided among the survey points based on the total amount of "traffic" at each location. Highway locations were weighted by average daily traffic and then randomly chosen until a figure of at least 60 percent of the total State ADT had been reached.

The survey instrument was divided into two parts, the first contained ten multiple response questions addressing the travelers' opinions with regards to gasoline availability and price, as well as several questions concerning their income, expenditures and other trip information. The second part was a diary-type, log sheet which asked the interviewee to give dates and the types of activities participated in, as well as the number of people participating in each activity. For every out-of-state resident contacted, travel party information was tallied on an enumeration form together with the parties state of origination.

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[1] Old West Regional Travel Study, Wyoming, Summer, 1979; Oblinger-McCaleb Architects, Engineers, and Planners, Denver, Colorado, 1979.

[2] Due to the logistics of surveying train passengers throughout the Region this mode of travel was eliminated from the survey and consequently a minimum amount of data was collected and tabulated.

The 1979 travel study differs from previous non-resident recreation studies in several important aspects.[1] First, the 1979 Travel Study specifically sought to gather information on non-resident visitors by mode as well as by season. The stratified design of the study allowed for more specific comparisons between types of non-resident visitors. Second, earlier studies were not conceived as a general travel study and only sought information on out-of-state recreationists. The broadened scope of the Old West Regional Travel Study strove to seek information on all out-of-state visitors as well as the non-resident recreationist. Therefore, to a certain extent there was a trade off between obtaining more specific information on non-resident, recreationists attitudes and opinions and more specific information on non-resident visitors by mode and season. Information was gathered from 5,770[2] travel parties during the Summer of 1979. This formed the basis for the origination, age of individuals, and number of individuals in travel group data. Out of this group, 1,797 usable survey instruments were returned. The information presented in the remainder of this Appendix is sub-divided into the following categories.

Estimation of Total Non-Resident Recreationists

Characteristics of Non-Resident Visitors

A. Origin and Destination
B. Trips' Purpose
C. Length of Stay
D. Expenditures
E. Income
F. Age
G. Responses to Gasoline Price and Availability

Estimation and Distribution of Activity Days

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[1]Clynn Phillips and Dwight M. Blood, Outdoor Recreation in Wyoming, Volume II, Outdoor Recreation Participation by Out-of-State Visitors in Wyoming, Division of Business and Economic Research, College of Commerce and Industry, University of Wyoming, Laramie, Wyoming, March, 1969. Richard E. Lund, A Study of Wyoming Out-of-State Highway Travelers, (2 Volumes; Laramie: Division of Business and Economic Research, College of Commerce and Industry, University of Wyoming, 1961).

[2]Due to coding errors, 5,731 surveys are deemed to be useable for recreation planning purposes.

TABLE E-3

WEIGHTED AVERAGE PERCENTAGE
OF RECREATIONISTS OR VACATIONISTS
WHO UTILIZED ROADS AT THE RESPECTIVE STATE
BORDER CROSSINGS THAT WERE RANDOMLY SURVEYED

Sequence Selected	Identification of Road	Percent of[1] Recreationists or Vacationists	Estimated Foreign[2] Passenger Vehicles (ADT)	Estimate of Recreationis or Vacationi for Individu Roads
1.	U.S. 89 - North Yellowstone Park Entrance	79.83	424	338
2.	I-25 - Colorado-Wyoming border south of Cheyenne	38.48	1,823	701
3.	I-80 West - near Evanston	28.62	1,445	414
4.	I-90 - North of Sheridan, Wyoming	28.88	507	146
5.	Wyoming 22- West of Jackson, Wyoming	71.02	670	476
6.	West Yellowstone Entrance, U.S. 20 - 191W	73.15	1,180	863
7.	U.S. 212 - Northeast Entrance to Yellowstone Park	80.00	228	182
8.	U.S. 287 - South of Laramie, Wyoming	46.51	711	331
9.	I-80 - East of Cheyenne, Wyoming	26.78	711	190
10.	I-90 - East of Sundance, Wyoming	61.22	517	317
11.	U.S. 18 - Near Mule Creek, Wyoming	48.57	205	100
	Total		8,421	4,058
	Weighted Average = 48.19			

[1] Percentage is derived from calculating actual number of returned survey instruments at each location compared to the number of non-resident travelers who indicated that the purpose of their trip was to vacation or to recreate.

[2] The total Foreign ADT was divided by two, to take into account foreign passengers entering the State. This procedure avoids double counting due to the entrance and exit of passengers.

Source: Wyoming Highway Department and Oblinger-McCaleb, Architects, Engineers, and Planners.

Characteristics of Non-Resident Visitors

A. Origin and Destination.

In 1979, those states adjacent to the State of Wyoming contributed the largest number of non-resident visitors. As shown in Table E-4 , this percentage has been increasing over the years; while conversely, the number of non-resident visitors from more distant regions has been declining. This trend is symptomatic of the increasing cost of energy and travel as people alter travel patterns and recreate closer to home. This fact is further dramatized by the responses to the energy questions included in the Old West Regional Travel Study. (These results are given in Table E-12 of Part G, Responses to Gasoline Price and Availability.)

The principal origin and destination states of visitors to Wyoming by all modes for the Summer of 1979 are given in Table E-5. Colorado is the single highest source of non-resident visitors for the State of Wyoming, supplying an estimated 15.1 percent. The top five states of origination, Colorado, California, Utah, Idaho, and Montana, supplied an estimated 46.5 percent of the non-resident visitors during the Summer of 1979. The six states that border Wyoming, namely Colorado, Utah, Idaho, Montana, Nebraska, and South Dakota, supplied 42.7 percent of all non-resident visitors. For those persons giving a destination state, besides Wyoming, Colorado, Montana, California, and Utah comprised the top five states for a cumulative percentage of 67.1 percent. The destination of travel parties within the State of Wyoming by Planning Region, as defined within this document, is illustrated in Table E-6. Planning Region 5, the Teton/Yellowstone area, accounted for 44.9 percent of all destinations. (See Figure 1-2on page 1-10 for the location of Planning Regions.) Region 1 ranked second with 20.7 percent of the destinations. Regions 2, 3, 7, and 6 were next with 10.3, 10.3, 7.0, and 2.5 percent respectively.

B. Trip Purpose

For recreation planning purposes, as well as for general economic reasons, it is important to know why people are visiting Wyoming. The purpose of

TABLE E-4

OUT-OF-STATE VISITORS IN WYOMING BY REGION OF ORIGIN
1960, 1967, and 1979

(Percentage distribution of travel parties)

Region of origin	1960[8]	1967[9]	1979[10]
Peripheral states[1]	27	30	43
Northwest states[2]	6	5	5
Southwest states[3]	17	16	14
Near South states[4]	5	4	4
Plains states[5]	14	14	11
Lake states[6]	18	17	10
Other[7]	11	14	13
Total	100	100	100
Number of travel parties surveyed:	N.A.	2,875	5,677

[1]Montana, Idaho, Utah, Colorado, Nebraska, and South Dakota.

[2]Washington and Oregon.

[3]California, Nevada, Arizona, and New Mexico.

[4]Oklahoma and Texas.

[5]Iowa, Kansas, Minnesota, North Dakota, and Wisconsin

[6]Illinois, Indiana, Michigan, Missouri, and Ohio.

[7]New York, Pennsylvania, New Jersey, Delaware, Maryland, Virginia, West Virginia, Kentucky, Washington, D.C., Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, Tennessee, Arkansas, Louisiana, Alabama, Georgia, South Carolina, North Carolina, Florida, Mississippi, Alaska, Hawaii, and Canada.

Source: [8]Richard E. Lund, A Study of Wyoming's Out-of-State Highway Travelers, Vol. 2, Division of Business and Economic Research, College of Commerce and Industry, University of Wyoming, p. 35.

[9]Clynn Phillips and Dwight Blood, Outdoor Recreation Participation by Out-of-State Visitors in Wyoming, Vol. 2, Division of Business and Economic Research, College of Commerce and Industry, University of Wyoming, p. 18.

[10]Oblinger-McCaleb, Old West Region Non-Resident Travel, Tourism and Recreation Survey, 1979.

TABLE E-5

PRINCIPAL ORIGIN AND DESTINATION STATES VISITORS
TO WYOMING BY ALL MODES FROM
JUNE 1, 1979 TO AUGUST 31, 1979

	Origin			Destination	
Home State	Number of Responses	Percent of Total Response	Destination	Number of Responses	Percent of Total Response
1. Colorado	857	15.1	1. Wyoming	642	38.6
2. California	636	11.2	2. Colorado	190	11.4
3. Utah	432	7.6	3. Montana	118	7.1
4. Idaho	389	6.9	4. California	100	6.0
5. Montana	324	5.7	5. Utah	67	4.0
6. Nebraska	268	4.7	6. South Dakota	56	3.4
7. Minnesota	206	3.6	7. Washington	54	3.2
8. Illinois	179	3.2	8. Oregon	50	3.0
9. Texas	165	2.9	9. Idaho	47	2.8
10. Washington	164	2.9	10. Nebraska	38	2.3
11. Iowa	161	2.8	11. Alberta	27	1.6
12. South Dakota	158	2.7	12. Minnesota	23	1.4
13. Michigan	136	2.4	13. Iowa	19	1.1
14. Oregon	129	2.3	14. Nevada	18	1.1
15. Wisconsin	114	2.0	15. Michigan	17	1.0
Total	4,318	76.0	Total	1,664	88.0

TABLE E-6

PERCENTAGE DISTRIBUTION OF
TRIP DESTINATIONS BY PLANNING
REGION FOR WYOMING, SUMMER - 1979

Planning Region	% of Destinations
1	20.7
2	10.3
3	10.3
4	3.3
5	44.9
6	2.5
7	7.0
Not Located	1.1

Source: Old West Regional Travel Study, Summer, 1979; Oblinger-McCaleb, Architects, Engineers, and Planners.

visitors' trips to Wyoming for the Summer of 1979 are given in Table E-7. The first fact that should be boted is that trip purpose varies by mode. For instance, automobiles were primarily used for recreation, while those using air transportation had business as a primary trip purpose. Bus travelers, on the other hand, primarily indicated that they were just passing through Wyoming.

TABLE E-7

VISITORS TRIP PURPOSE TO WYOMING
BY MODE IN THE SUMMER OF 1979

Purpose	Auto	Air	Bus	Number of Responses	Percent of Total Response
Vacation or Recreation	726 (40.9%)	79 (34.6%)	20 (16%)	825	38.8
Just Passing Through	603 (33.9%)	5 (2.2%)	66 (52.8%)	674	31.6
Visit Friends or Relatives	266 (15.0%)	60 (26.3%)	30 (24%)	356	16.7
Business	170 (9.6%)	81 (35.6%)	6 (4.8%)	257	12.1
Convention	11 (.6%)	3 (1.3%)	3 (1.3%)	17	.8
Total	1,776	228	125	2,129	100.0%

Source: Old West Regional Travel Study, Wyoming, Summer, 1979; Oblinger-McCaleb, Architects, Engineers, and Planners.

The number of visitors using autos to visit Wyoming was the highest of any mode with 83.4 percent, as would be expected. Because of this fact, trip purposes for those using autos tends to overwhelm the results when aggregated. For all visitors, 38.8 percent had vacation or recreation as a primary purpose. Just passing through was the second highest response with 31.6 percent and visiting friends or relatives ranked third with 16.7 percent.

C. Length of Stay

The average number of days spent in the State for the Summer of 1979 for all modes was 3.5 and the average number of nights was 2.9. The average number of days and nights spent in the State by mode is given in Table 8.

TABLE E-8

AVERAGE NUMBER OF DAYS AND NIGHTS
IN THE STATE BY MODE FOR
SUMMER OF 1979

Mode	Days	Nights
Automobile	3.01	2.4
Air	7.9	7.5
Bus	2.1	1.7

Source: Old West Regional Travel Study, Wyoming, Summer, 1979; Oblinger-McCaleb, Architects, Engineers, and Planners.

The differences in the duration of the visit to Wyoming reflect the differences in trip purpose by mode. The longer stays recorded by those traveling by air could be a result of the business traveler, who upon flying to Wyoming, makes the most of their stay and, therefore, stays longer maximizing the benefits relative to the cost of flying. The same may be said of the vacation/recreationist who travels to Wyoming by air. One could also argue that air traveler is more likely to have a higher income and, therefore, can afford to stay longer. The relatively low number of days and nights in the State for bus travelers reflects the fact that 52.8 percent of these people were just passing through.

D. Expenditures

The average expenditure for the "average" day in the State of Wyoming for the Summer of 1979 is given in Table E-9 . It should be noted that these expenditures, as given by the survey participants, are subject to errors of recall as well as errors of omission. Hopefully, the use of statistical averages as well as the use of "mailback" questionnaires, minimizes the error.

TABLE E-9

SUMMARY OF AVERAGE OF EXPENDITURES[1]
FOR VARIOUS ITEMS BY MODE FOR WYOMING,
SUMMER OF 1979

Expenditure Item	Auto	Air	Bus	All
Hotel	11.31	25.02	3.38	12.15
Campground	1.47	.60	.14	1.29
Eat and Drink	13.35	24.02	7.66	14.05
Grocery	3.01	2.91	1.58	2.89
Sporting Goods	.82	1.93	.05	.88
Gas and Auto Repair	18.84	10.75	2.17	16.90
Amusement and Recreation	3.35	4.47	3.04	3.42
Other	6.20	6.62	2.35	5.96
Total	58.35	76.32	20.37	57.54

[1]Average expenditures are for the "average" day in the State of Wyoming.

Source: Old West Regional Travel Study, Wyoming, Summer, 1979; Oblinger-McCaleb, Architects, Engineers, and Planners.

Comparison between modes for the various expenditure categories reveals important differences between traveler expenditure patterns. Air travelers have higher expenditures for all categories, except for Csmpground, Grocery and Gas and Auto Repair. Bus travelers have the lowest expenditures for all categories.

The total average daily expenditures for all travel parties by all modes combined was $57.54 per day. Using an estimated total of 987,467 summer, non-resident travel parties and multiplying by the average daily expenditure figure, results in an approximation of non-resident expenditures for the Summer of 1979 totaling $56,818,851.

E. Income

The distribution of income for nonresident visitors to Wyoming is given in Table E-10 for both individuals and families by mode. For families, 70 percent had an income over $15,000 for all modes. For individuals, 44.5 percent had an income over $15,000. For air travelers, 81.5 percent of the families had an income above $15,000 and for bus travelers the percentage was 47.7 percent. Individuals generally had lower incomes than families, with 46.4 percent for auto, 63.6 percent for air and only 8.8 percent of bus nonresident visitors having incomes above $15,000.

TABLE E-10

NON-RESIDENT VISITORS INCOME FOR WYOMING
SUMMER OF 1979

	Frequency (%)*			
Range	Auto	Air	Bus	Combined
Family				
$0.00 - $ 5,999	5.1		52.3	6.1
$ 6,000 - $ 9,999	9.5	5.4	22.7	8.6
$10,000 - $14,999	17.2	7.8	29.5	15.2
$15,000 $24,999	35.1	26.4	25.0	31.0
$25,000 $49,000	35.4	35.7	20.4	32.0
$50,000 and Over	6.6	19.4	2.3	7.0
Individual				
$ 0.00 - $ 5,999	24.6	13.6	47.1	25.4
$ 6,000 - $ 9,999	13.4	6.8	29.4	14.5
$10,000 - $14,999	15.6	15.9	14.7	15.5
$15,000 - $24,999	29.9	36.4	8.8	28.4
$25,000 - $49,999	14.3	20.4	--	13.5
$50,000 - Over	2.2	6.8	--	2.6

*Totals may not add to 100 percent due to rounding.

Source: Old West Regional Travel Study, Wyoming, Summer, 1979; Oblinger-McCaleb, Architects, Engineers, and Planners.

F. Age

The largest age group of non-resident visitors to the State of Wyoming for the Summer of 1979 were in the 26-30 age bracket. As can be seen from Table E-11, which gives the percentage distribution by age and mode of travel for Wyoming, Summer non-resident visitors, air travelers are generally older than travelers by other modes and bus travelers were the youngest group. 54.5 percent of the visitors by air were below thirty-five years of age and 66.4 percent of the bus travelers were thirty-five years old or less. 61.5 percent of the non-resident visitors who traveled by automobile were less than thirty-five years of age. For all modes combined, the percentage of travelers below 35 years of age was 61.1 percent.

Non-resident visitors who traveled by bus also had a higher percentage of individuals over 55, with 17.7 percent. For auto and air, the respective percentages of those over 55 years of age were 12.1 and 13.1 percent. For all modes combined, 12.4 percent were over 55 years of age.

TABLE E-11

AGE DISTRIBUTION BY MODE FOR NON-RESIDENT VISITORS TO THE STATE OF WYOMING SUMMER OF 1979

	Percentage Distribution*			
Age	Auto	Air	Bus	Combined
1- 5	6.7	2.5	6.4	6.3
6-10	9.2	2.8	4.7	8.6
11-15	8.6	5.5	4.5	8.3
16-20	8.7	8.0	19.4	9.1
21-25	9.8	13.3	16.9	10.3
26-30	10.1	11.8	9.6	10.1
31-35	8.4	10.5	5.4	8.4
36-40	9.0	11.4	5.2	8.9
41-45	6.5	7.9	4.2	6.5
46-50	6.4	7.7	4.0	6.3
51-55	4.7	5.4	4.2	4.7
56-60	4.8	5.4	6.6	4.9
61-65	3.7	4.2	5.9	3.8
66 and Over	3.6	3.5	5.2	3.7

*Total may not add to 100 percent due to rounding.

Source: Old West Regional Travel Study, Wyoming, Summer, 1979; Oblinger-McCaleb, Architects, Engineers, and Planners.

G. Responses to Gasoline Price and Availability

The traveling public's response to the price and availability of gasoline has important consequences for outdoor recreation in Wyoming since such a large number of non-resident recreationists travel to the State by automobile. As part of the Old West Regional Travel Study, six questions were included which addressed possible responses to the price and availability of gasoline. The survey results to these questions are summarized in Table E-12. Due to the fact that the questions allowed for multiple responses, the percentages of non-responses may appear high. But when one considers that even if ten percent of the potential recreationists decide to cancel trips, this could translate into many thousands of activity days and possibly millions of dollars in lost tourist related revenues, the ramifications become clear.

From Table E-12, several indications are apparent. First, as the price of gas increases it will affect recreation demand. For instance, at the present price of gasoline, only 5.5 percent of the people said they cancelled trips. This figure increases to 12.2 percent with gas at $1.25 per gallon and to 14.7 percent for gas at $1.50 per gallon. Second, as the cost of fuel increases, more people indicate that they will be staying longer at their destinations and travelling closer to home. To a certain extent, the longer stays may economically offset the decline in the total number of tourists. But this may be true only for high volume tourist areas and may not portend well for other areas. As previously indicated,the states that border Wyoming contribute the majority of non-resident visitors. The survey results indicate that as the cost of motor fuel increases, visitors from states neighboring Wyoming will probably increase.

The results from the Old West Regional Travel Study correlate well with the finding of a household survey published in the Utah Tourism and Recreation Review[1]. This survey of households in six major metropolitan areas showed

[1] James F. Burke and Peter W. Williams, Utah Tourism and Recreation Review, Institute of Outdoor Recreation and Tourism, Utah State University, July, 1979.

TABLE E-12
FREQUENCY OF RESPONSE - ALL MODES

Present Price of Gasoline

	Response Frequency	Response Percent	Non-Response Frequency	Non-Response Percent	Total Frequency	Total Percent
No Influence	1,270	(70.6)	527	(29.4)	1,797	(100.0)
Shorter Trip	166	(9.2)	1,631	(90.8)	1,797	(100.0)
Longer Stays	80	(4.4)	1,717	(95.6)	1,797	(100.0)
Fewer Side Trips	204	(11.4)	1,593	(88.6)	1,797	(100.0)
Cancelled Trips	99	(5.5)	1,698	(94.5)	1,797	(100.0)
Mode Change	85	(4.7)	1,712	(95.3)	1,797	(100.0)

Availability of Gas

	Response Frequency	Response Percent	Non-Response Frequency	Non-Response Percent	Total Frequency	Total Percent
No Influence	1,242	(69.1)	555	(30.9)	1,797	(100.0)
Shorter Trip	99	(5.5)	1,698	(94.5)	1,797	(100.0)
Longer Stays	56	(3.1)	1,741	(96.9)	1,797	(100.0)
Fewer Side Trips	173	(9.6)	1,624	(90.4)	1,797	(100.0)
Cancelled Trips	71	(4.0)	1,726	(96.0)	1,797	(100.0)
Mode Change	71	(4.0)	1,726	(96.0)	1,797	(100.0)

Gas at $1.25/gallon

	Response Frequency	Response Percent	Non-Response Frequency	Non-Response Percent	Total Frequency	Total Percent
No Influence	575	(31.9)	1,242	(69.1)	1,797	(100.0)
Shorter Trip	313	(17.4)	1,484	(82.6)	1,797	(100.0)
Longer Stays	155	(8.6)	1,642	(91.4)	1,797	(100.0)
Fewer Side Trips	302	(16.8)	1,495	(83.2)	1,797	(100.0)
Cancelled Trips	220	(12.2)	1,577	(87.8)	1,797	(100.0)
Mode Change	216	(12.0)	1,581	(88.0)	1,797	(100.0)
Travel Closer to Home	599	(33.3)	1,198	(66.7)	1,797	(100.0)

Table E-12 (continued)
Frequency of Response - All Modes

Gas at $1.50/gallon

	Response Frequency/Percent		Non-Response Frequency/Percent		Total Frequency/Percent	
No Influence	469	(26.1)	1,328	(73.9)	1,797	(100.0)
Shorter Trip	294	(16.4)	1,503	(83.6)	1,797	(100.0)
Longer Stays	169	(9.4)	1,628	(90.6)	1,797	(100.0)
Fewer Side Trips	298	(16.6)	1,499	(83.4)	1,797	(100.0)
Cancelled Trips	264	(14.7)	1,533	(85.3)	1,797	(100.0)
Mode Change	264	(14.7)	1,533	(85.3)	1,797	(100.0)
Travel Closer to Home	625	(34.8)	1,172	(65.2)	1,797	(100.0)

Gas Rationing

	Response Frequency/Percent		Non-Response Frequency/Percent		Total Frequency/Percent	
No Influence	380	(21.1)	1,417	(78.9)	1,797	(100.0)
Shorter Trip	298	(16.6)	1,499	(83.4)	1,797	(100.0)
Longer Stays	185	(10.3)	1,612	(89.7)	1,797	(100.0)
Fewer Side Trips	281	(15.6)	1,516	(84.4)	1,797	(100.0)
Cancelled Trips	310	(17.3)	1,487	(82.7)	1,797	(100.0)
Mode Change	313	(17.4)	1,484	(82.6)	1,797	(100.0)
Travel Closer to Home	754	(42.0)	1,043	(58.0)	1,797	(100.0)

Source: Old West Regional Non-Resident Travel, Tourism, and Recreation Survey, Oblinger-McCaleb, Architects, Engineers, and Planners, 1979.

that as the price of gasoline rose from $1.00 per gallon to $1.50, those who would use their automobile to travel dropped from 48.4 percent to 20.4 percent. The Utah Tourism Survey indicated that at $1.00 per gallon of gasoline, everyone would continue to travel. However, as the price of gasoline rose to $1.25 and $1.50 per gallon, 33.9 percent and 50.9 percent of the survey respondents respectively indicated that they would not travel. The Utah Tourism Survey further supported the findings that people wo do travel, will be travelling closer to home. The Utah Tourism Survey showed that at $1.20 per gallon for gasoline, only 34.1 percent of the respondents would be willing to travel more than 500 miles round-trip by motor vehicle. The percentage drops to 20.5 percent for gasoline priced at $1.50 per gallon.

Estimation and Distribution of Activity Days

As previously described in the introduction, the survey instrument included a diary-type log sheet which allowed the recreationist to keep a day-by-day record of his or her recreation activities. Upon return, the diary entries were further coded by State Planning Region allowing for a more specific geographic location of the activities recorded. This process resulted in the construction of an activity by planning region matrix for activity days for the Summer of 1979.

Table E-13 illustrates the number of surveys distributed at the randomly selected survey locations as well as depicting the number of surveys returned and the corresponding number of non-resident travel parties who indicated that the purpose of their trip to Wyoming was to vacation and/or to participate in recreation activities. As shown in Table E-13, a total of 5,731 surveys were distributed and 1,797 surveys were returned which represents a total sample response rate of 31.4 percent for all modes combined. Table E-13 as well as Table E-14 illustrate that there were a total of 826 travel party respondents (46 percent of the total) who indicated that they came to Wyoming to vacation and/or to participate in outdoor recreation activities. Furthermore, Table E-14 shows that there was an average of 2.9 persons per recreation party for all modes surveyed.

The next procedure in estimating the total number of summer non-resident activity days entailed calculating the average activity days per recreation party by the four travel modes surveyed. As shown in Table E-15, there were 16,310 activity days recorded on the survey diaries for the summer. By dividing the 16,310 activity days by the 826 vacation or recreation parties it was estimated that for all modes there were 19.7 average activity days recorded per recreation party. Air recreation travel parties recorded an average of 39.3 activity days which was over twice the amount tabulated for motor vehicle and bus travelers. As discussed previously, this trend is undoubtedly due to the fact that air travelers have larger incomes and consequently they can stay in the State for a longer period of time.

TABLE E-13

SAMPLE DISTRIBUTION AND RESPONSE

Motor Venicle	Number Distributed	Number Returned	Number of Recreationists or Vacationists	Percent of Response By Location and Mode
U.S. 89 - North Yellowstone Park Entrance	328	119	95	36.3
I-25 - Colorado-Wyoming border south of Cheyenne	1,008	317	122	31.4
I-80 West of Jackson, Wyoming	841	255	73	30.3
I-90 - North of Sheridan, Wyoming	218	90	26	41.2
Wyoming 22 - West of Jackson, Wyoming	365	107	76	29.3
West Yellowstone Entrance, U.S. 20 - 191W	699	190	139	27.2
U.S. 212 - Northeast Entrance to Yellowstone Park	124	35	38	28.2
U.S. 287 - South of Laramie, Wyoming	399	129	60	32.3
I-80 - East of Cheyenne, Wyoming	418	112	30	26.8
I-90 - East of Sundance, Wyoming	291	98	60	33.7
U.S. 18 - Near Mule Creek, Wyoming	114	35	17	30.7
Subtotal	4,805	1,487	725	31.0
Air				
Casper	209	78	17	37.3
Cheyenne	64	23	9	35.9
Jackson	90	41	31	45.5
Rock Springs	45	15	6	33.3
Sheridan	63	28	17	44.4
Subtotal	471	185	79	39.3
Bus				
Casper	41	15	1	36.6
Cheyenne	237	65	12	27.4
Jackson	67	14	7	20.9
Rock Springs	66	17	0	25.8
Subtotal	411	111	20	27.0
Train				
Cheyenne	44	14	1	
Subtotal	44	14	1	31.8
Total All Modes	(5,731)	(1,797)	(825)	(31.4)

Source: Oblinger-McCaleb, Architects, Engineers, and Planners, Old West Region Non-Resident Travel, Tourism and Recreation Survey, Summer, 1979.

TABLE E-14

ESTIMATION OF PERSONS PER
RECREATION OR VACATION PARTY
BY MODE

Mode	Number of Vacation[1] or Recreation Parties	Total Number of[2] Persons in Recreation Party	Average Number of Persons Per Recreation Party
Auto	726	2,235	3.08
Air	79	147	1.86
Bus	20	34	1.70
Rail	1	2	2.0
Total	826	2,418	2.9

[1]Those responding to Question #6 of Survey, "Purpose of Trip - Vacation or Recreation", Old West Non-Resident Survey, Summer 1979.

[2]Cross tabulation of number in recreation travel group by mode surveyed.

*Note: Total returned summer questionnaires equals 1,797.

Source: Oblinger-McCaleb, Architects, Engineers, and Planners, Old West Region Non-Resident Travel, Tourism and Recreation Survey, Summer 1979.

TABLE E-15

ACTIVITY DAYS PER
RECREATION PARTY
BY MODE

Mode	Activity Days[1] By Mode	Vacation or[2] Recreation Parties	Average Activity Days Per Recreation Party by Mode
Auto	12,769	726	17.6
Air	3,109	79	39.3
Bus	310	20	15.5
Rail	0	1	0
Subtotal	16,188	826	19.7
- Unknown	122		
Total	(16,310)		

[1]From Old West Survey (recreation participation results).

[2]From Old West Survey (See Table E-14).

Source: Oblinger-McCaleb, Architects, Engineers, and Planners, Old West Region Non-Resident Travel, Tourism and Recreation Survey, Summer, 1979.

Table E-16 takes the total estimated number of summer recreationists by travel mode (refer to Table E-2) and divides by the estimated number of persons per recreation party (refer to Table E-14). This calculation indicates that there were approximately 875,130 recreation travel parties who came to Wyoming during the summer of 1979. Table E-16 takes the estimated number of recreation parties and multiplies by the average activity days per recreation party (refer to Table E-15) which results in an estimated total of 17,325,991 activity days for the summer.

The last procedure entailed apportioning the estimated total number of activity days among the thirty summer survey activities according to the percentage of the total each activity represented in the sample. Once the total number of activity days by activity were calculated, these estimates were subsequently divided among the seven planning regions by the percentage each region had of the total number of activity days for that activity.

This resulted in Table E-18 which illustrates non-resident summer activity days by planning region. A problem that arose during this process was that for each activity, there were a certain number that could not be located by planning region. This resulted in the column headed "unattributable", or in other words, could not be attributed to a specific planning region. Certain activities, due to the non-site specific or wilderness orientation (such as primitive campgrounds), had a higher percentage of unattributable activity days. Therefore, in order not to penalize these activities by removing all unattributable activities from the total, this category was included. In addition, the activities days that were unattributable were distributed back into the respective planning regions on a percentage basis which represented the base figure for estimating annual non-resident recreation demand by activity type (refer to Table 5-2 on page 5-13).

TABLE E-16

TOTAL ESTIMATED NUMBER
OF RECREATION PARTIES
BY MODE

Mode	Total Estimated[1] Number of Recreationists	Estimated Number[2] of Persons Per Recreation Party	Total Estimated Number of Recreation Parties
Auto	2,377,220	3.08	771,825
Air	167,767	1.86	90,197
Bus	21,621	1.70	12,718
Rail	779	2.0	390
Total	2,567,387	2.9[3]	875,130

[1]From Table E-2.

[2]From Table E-14.

[3]Rounded to nearst tenth.

Source: Oblinger-McCaleb, Architects, Engineers, and Planners, Old West Region Non-Resident Travel, Tourism and Recreation Survey, Summer, 1979.

TABLE E-17

TOTAL ESTIMATED NUMBER OF
ACTIVITY DAYS
BY MODE

Mode	Total Estimated Number of Recreation Parties	Activity Days Per[1] Party	Total Activity Days
Auto	771,825	17.6	13,854,120
Air	90,197	39.3	3,544,742
Bus	12,718	15.5	197,129
Rail	390	0	--
Total	875,130	19.7[2]	17,325,991

[1]From Table E-15.

[2]Rounded to nearest tenth.

Source: Oblinger-McCaleb, Architects, Engineers, and Planners, Old West Region Non-Resident Travel, Tourism and Recreation Survey, Summer, 1979.

TABLE E-18

NON-RESIDENT SUMMER
SURVEY RESULTS
ACTIVITY DAY SUMMARY[3]

ACTIVITY[1]	Activity Days - By Planning Region								
	1	2	3	4	5	6	7	Unattributable[2]	Total
01 Primitive Campground	82,859	6,374	105,167	44,616	472,721	43,554	87,108	56,302	898,701
02 Public Campground	208,209	69,049	107,292	83,921	1,395,852	31,869	112,603	21,246	2,030,041
03 Private Campground	107,291	44,616	94,544	58,426	288,944	39,305	32,931	45,679	711,736
04 Special Camp	12,748	0	6,374	10,623	57,365	0	167,842	26,557	281,509
05 Picnicking: Highway Reststops	91,357	23,370	79,672	37,180	155,095	2,125	55,239	47,803	491,841
06 Picnicking: area with Tables	74,362	82,859	72,237	89,234	634,184	21,247	30,807	19,121	1,024,051
07 Picnicking: area without Tables	38,243	9,561	129,600	33,993	251,764	28,681	194,400	9,561	695,803
08 Day Hiking	138,098	47,803	104,105	20,184	1,019,802	29,744	47,803	11,685	1,419,224
09 Backpacking	15,934	7,436	74,360	0	182,715	48,866	41,430	1,062	371,803
10 Jogging	37,181	0	1,062	5,312	60,551	3,187	4,249	14,872	126,414
11 Horseback Riding	4,249	32,932	46,741	43,554	190,150	20,184	24,433	5,312	367,553
12 Fishing: Stream/ River	90,295	7,436	150,846	30,806	487,592	40,367	112,603	10,623	930,568
13 Fishing: Lakeshore	67,987	15,934	46,740	12,748	227,331	38,243	87,108	3,187	499,278
14 Fishing: Lake, from boat	18,059	0	10,623	47,803	127,475	6,374	10,623	0	220,957

[1]Activities 15, 19, 30, and 31 are winter sports; thus, they are omitted from the table.

[2]Activities which we were unable to locate in a specific Planning Region

[3]Results based on those persons having vacations as a trip purpose.

SUMMER
SURVEY RESULTS
ACTIVITY DAY SUMMARY - CONTINUED

ACTIVITY[1]	Activity Days - By Planning Region								
	1	2	3	4	5	6	7	Unattributable[2]	Total
16 Hunting	--	--	4,249	--	4,249	--	36,119	--	44,617
17 Off Highway Vehicle Use: Motorcycle	23,369	--	4,249	--	6,373	--	1,062		35,053
18 Off Highway Vehicle Use: Other	22,308	--	49,928	--	25,495	4,249	148,721		250,701
20 Golf	--	2,125	23,370	6,374	13,810	1,602	4,249	6,373	57,363
21 Tennis	--	7,436	12,747	6,373	7,436	--	--	--	33,992
22 Swimming: Public Pool	2,125	26,556	8,498	45,679	62,675	1,062	4,249	1,062	151.908
23 Swimming: Private Pool	62,675	21,246	103,042	36,119	172,091	26,557	9,561	11,685	442,976
24 Swimming: Other	22,308	27,620	5,311	--	226,268	1,062	172,090	44,616	499,277
25 Power Boating	11,685	6,374	--	--	46,741	6,374	27,619	--	98,793
26 Waterskiing	2,125				6,374	6,374		6,373	21,246
27 Sailing	--	13,809	--	--	--	--	--	--	13,809
28 Canoe/in river	13,810	--	3,187	40,367	167,842	1,062	207,147	23,370	456,785
29 Canoe/in lake	3,187	--	6,374	--	56,301	--	--	--	65,862

SUMMER
SURVEY RESULTS
ACTIVITY DAY SUMMARY - CONTINUED

ACTIVITY[1]	Activity Days - By Planning Region								
	1	2	3	4	5	6	7	Unattributable[2]	Total
32 Visiting Special Attractions	157,219	40,367	157,219	253,888	1,532,887	75,422	48,866	19,122	2,284,990
33 Visiting Historical Sites	142,347	74,360	134,911	112,604	996,430	29,744	59,488	19,122	1,569,006
34 Attending Events	190,150	45,678	76,485	131,724	440,852	27,620	209,271	108,354	1,230,134
TOTAL	1,640,180	612,941	1,618,933	1,151,528	9,317,365	534,334	1,937,623	513,087	17,325,991

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